



NEW KIDS UNI OPENS

The new Kids' Uni will open with a flourish on August 8 with the unveiling of a bronze plaque and refreshments served on the newly completed premises.

The celebrations begin at 5.30pm (without the kids on this occasion) with the official opening being performed by the Bursar Mr. B. J. Meek (BA, Dip Ed) at 6.00pm.

President of the Child Care Committee of the University of Wollongong Parents Club Mrs. Kim Draisma said the centre will cater for 25 children every hour, eight hours a day from 8.30am to 5.30pm. Children of students and staff (when vacancies are available) can attend. Mrs. Draisma said it was most gratifying to have the new premises ready for use less than a year after the old premises had burned down in October 1979.

University Project manager Mr. Peter McNamara said he was also gratified that the building was finished by the scheduled date, August 6.



Above: The University of Wollongong's Project Manager, Mr. Peter McNamara (left) and Estate Manager Mr. John Bell discuss building plans during the construction of the new Kid's Uni.

"The majority of funds have come from insurance on the old building, with some assistance from the University and the University Union, particularly in re-equipping the building. Funds available did not permit acceptance of a tender and it appeared for a time that the project might lapse. The Estate Division then suggested it be allowed to construct the building on a project management basis and this has proved extremely successful in completing the project on time and within budget," Mr. McNamara said. This method is now to be used on some other projects such as construction of a mezzanine floor in the Metallurgy Foundry and construction of the first stage of a Service Complex.

In Kids' Uni facilities include a large playroom and storeroom, children's sleeping area, laundry, toilet and kitchen. Stage 11 of the building, planned for a later date, will extend these facilities. The project was designed by local architect Bruce Bowman.

Mr. McNamara said special thanks were due to the staff of the Property Section who did a lot of work to make the building a successful project and also to the mothers and staff of Kids' Uni who have been "co-operative and supportive."

Hawke to give memorial lecture

President of the ACTU Mr. Bob Hawke will visit the University of Wollongong on 26th August to give the second R.F.X. Connor Memorial Lecture.

The R.F.X. Connor Memorial Lecture was organised by the University's Historical Society for the first time last year and was then given by the Hon. E.G. Whitlam, A.C., Q.C. Mr. Whitlam spoke on "The Connor Legacy."

This year the lecture will be held at 7.30p.m., August 26th, at the Union Hall. Tickets are available from the Secretary of the Department of History at \$2 per head.

ICC PROVIDES TRAFFIC FLOW STUDY GRANT

The Illawarra County Council has provided a grant of \$3,000 to the Wollongong University Department of Electrical Engineering for analysis of data obtained during an Urban Transportation Study Group of New South Wales 1974 survey of private and commercial driving patterns.

The grant enables the Department of Electrical Engineering to employ a research assistant to analyse the data from the Commercial Vehicle Survey.

The Chairman of the Department of Electrical Engineering, Professor B.H. Smith, expects the analysis to be completed by mid-1981. One of the objects of the analysis is to determine the optimum locations for battery interchange stations and public recharging sites in the Wollongong region in the event that significant numbers of extant private and light commercial vehicles are replaced by electric vehicles.

Although the running costs of electric vehicles are less than those for internal combustion engines, the higher capital cost and restricted operating range of electric vehicles inhibits their use. The distance which may be travelled before the batteries require recharging is determined essentially by the power to weight ratio of the batteries. At the present time the traditional lead acid battery is the only one which is both commercially available and economically

possible. It provides a range of about 60 kilometres. As a result of extensive research and development activity throughout the world, alternative, improved batteries are expected to reach the market within the next few years so increasing the operating range on one battery charge to about 250 kilometres. Once this happens commercial interests are likely to provide the infra-structure now supplied for internal combustion engines, such as a network of stations throughout the state similar to the existing petrol service stations.

The Department of Electrical Engineering together with Mr. L. Stokes of the Department of Economics as research assistant has recently completed an analysis of the data concerning private vehicle journeys within the Illawarra region. This study sought answers to a number of questions which arise if the assumption is made that private internal combustion engines are replaced by electric vehicles. It found, for example, that 78% of the sampled cars' weekday histories could have been under-

taken by electric vehicles requiring but one overnight charge at home. Weekend histories, which almost certainly would have involved longer journeys, were not available but 26% of the sampled cars were second or third cars within a family so it is reasonable to assume that all of these could have been replaced by electrical vehicles without inconvenience to the users.

A set of optimal public and commercial parking sites was identified at which the installation of recharging facilities would be justified and the increase in electricity demand throughout a typical day was calculated on the assumption that electric vehicles replaced existing internal combustion engines.

The Department of Electrical Engineering is also undertaking research concerning variable speed drives for industry and electric vehicle transmissions. The Department is receiving \$25,000 a year in research grants from L.N.C. Industries, via Electric Cars Pty. Ltd., to support the programme.

'Theatre takes exciting step'

"The vitality and professionalism of theatre in Illawarra could only benefit from new blood and new ideas," the Lord Mayor said this month.

Alderman Frank Arkell made his comments after attending the Theatre South production of "The Con Man."

The main contribution of this excellent production was that it brought new talent into Illawarra and local amateur actors had the opportunity to work with professionals from Sydney.

"I hope Theatre South goes from strength to strength," said Alderman Arkell. "Illawarra is ready for professional theatre and if it can take root here it will provide a new industry in the region."

"It would be unfortunate if parochialism and local jealousies were allowed to nip this exciting venture in the bud. Theatre goes everywhere should support this development," he said.

Alderman Arkell pointed out that there were a number of towns in Australia smaller than Wollongong which were able to maintain professional theatre companies.*

"We have the talent, we have the audiences. Local amateur groups would not suffer from the presence of a professional company," he said. "Instead some of the people who prefer to go to Sydney for their

theatre may eventually be attracted back to Illawarra."

"I can't believe that any true theatre people in the region would object to such a development."

"The University of Wollongong is throwing its weight behind the venture, and on the night I attended there were people there from all walks of life, all of them obviously enjoying the show."

"These people, with their loyalty to Wollongong, would ensure the survival of Theatre South."

"The existence of a successful professional theatre group would strengthen the City's case for a performing arts centre," he said.

* Wagga, Albury, Armidale, Newcastle, Penrith, Townsville.

Landscape supervisor at the University of Wollongong, Leon Fuller blossomed as an author this month when he launched the first textbook on Wollongong trees - a project which grew out of "hundreds of hours of tramping in the bush."

"The tramping was a necessity," Leon told Campus News on the eve of the book launching.

"I had some very firm ideas on how I wanted the University gardens to develop and the only way I could find the information I needed was to go looking in the bush."

Leon's aim was to extend the character of the escarpment into the University grounds (in which aim he has succeeded admirably) and to do that he needed detailed information on the natural flora of the area.

"The only books I could find talked about flora in the Sydney area and more generally - there was nothing on Wollongong itself," Leon said.

He has been exploring the bush since 1975 but the idea for a book was born two and a half years ago. The writing was done in Leon's spare time which he says has given him a hectic life.

The book "Wollongong Native Trees," lists 127 species of trees native to Wollongong, including 74 rainforest species and 24 eucalypts. Leon says Wollongong is the "last outpost of rainforest in the south" so the area contains many species of trees that are not found further south.

A native of Wollongong, Leon grew up in Thirroul and worked as a TV technician until he was 25. Then an overseas trip changed the course of his life.

"Seeing the world had a strange effect - I suddenly realised life was too short to spend it behind a desk or indoors so I went to the Ryde Horticultural College, graduated, spent a year in Lane Cove as parks supervisor and then came back to Wollongong," he said.

Creating the University gardens was a welcome challenge - Leon expects the gardens to reach maturity in five to ten years. His particular interest in trees extends beyond the classification level. "Trees are remarkable things," he said. "They have their own relationships and likes and dislikes - and if ever I write another book it would be on this subject."

Photographs for "Wollongong Native Trees" were taken by Russell Badans.

Trees text grew from bush walks



Author of "Wollongong Native Trees," Leon Fuller. As Landscape Supervisor at the University of Wollongong, he has been able to find plenty of material for his book.

Top two join Economics

Two outstanding young Australians have resigned from tenured appointments in Europe to take up appointments as lecturers in economics at Wollongong.

They are John Mangan, formerly lecturer in economics in the Centre for Management Studies in the University of Aston, Birmingham; and Grant Kirkpatrick, research economist in the Weltwirtschaft Institut, Kiel, Western Germany.

John Mangan is an Honours graduate from Queensland, and has a Masters' degree from Lancaster. His teaching and research in Birmingham have been mainly on industrial relations and industrial economics.

He has developed his use of econometrics in preparing journal publications in these areas of study - particularly on strike activity in British ports and on cyclical variations in wages. He has also been engaged in research on the demand for labour in Australian manufacturing.

Grant Kirkpatrick is due to take up his Wollongong appointment in August. He completed his B.Ec. (Hons) and His M.Ec. at the University of Adelaide, and has taught economics as a tutor at Flinders, South Australia and as a lecturer at Brunel University, London. For the last 2½ years he has been employed in economic research at the prestigious Weltwirtschaft Institut in Kiel. He and his partner, Jurgen Roth, have been responsible for research on fluctuations in business activity - including

basic economic research, forecasting, and policy studies. While Roth's share has been the building of econometric growth models, Kirkpatrick has worked on the development of short and medium term theory and econometric testing on real wages and employment. This work will continue on the basis of collaboration between the Economics Department and the Computer Centre in Wollongong, and the Kiel Institut. Some of the results of this research have been published by the Institute and by international journals.

Both newly appointed lecturers are interested in contributing to the development of the study of industrial relations and management studies in Wollongong University.

OVERSEAS NEWS

The Carnegie-Mellon University, of America, conducts an annual College Management Program.

The intensive four-week in-residence course is designed to fit the special needs of senior university administrative officers. Australian university administrators and senior faculty who will be visiting America are invited to take part in the program. For further information, please contact Dr. Harry Faulk, Director, Educational Management Development Center, Carnegie-Mellon University, Pittsburgh, Pennsylvania, 15213, America.

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The Institute of International Education, New York, has established an International Faculty Lecture Bureau with the support of a grant from the Andrew W. Mellon Foundation.

The Bureau is designed essentially to provide opportunities for foreign scholars and specialists who are in America on other educational programs to give occasional additional lectures at American colleges and universities. Host Institutions can be ex-

Uni joins awards body

Wollongong University Deputy Vice-Chancellor Professor Alex M. Clarke has been invited by Federal Education Minister Mr. Wal Fife to accept membership of the Postgraduate Research Awards Selection Committee.

The committee will allocate next year's reserve quota of the awards, which are known as "pool" awards.

Professor Clarke has been a member of the Australian Nominations Committee for the Commonwealth Scholarship and Fellowship Plan (August, 1977 - August 1979) and a member of the Selection Committee for last year's and this year's Postgraduate Course Awards.

Philosophy Seminar

One of the world's most eminent philosophers will present a paper in the Department of Philosophy at the University of Wollongong on August 15.

Professor David Lewis (Princeton and A.N.U.) will present a paper entitled "Veridical Hallucination and Prosthetic Vision," a paper which should be of interest to those working in the general fields of perception and/or causation. Professor Lewis has

published many books and articles covering a wide range of topics in Logic, Metaphysics, Epistemology and Philosophy of Psychology.

The new term at the Diplomatic Academy in Vienna will start on October 1. The syllabus comprises historical studies of international law and organisations, international economics and their institutions, company management, international politics and languages.

For further information, please contact the Secretariat, Diplomatic Academy, Favoritenstrasse 15, A-1040, Vienna, Austria.

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The Second International Congress on Legal Science sponsored by the International Centre of Legal Science, The Hague, will be conducted at the Free University, Amsterdam, from September 7-12.

Those interested should contact Dr. M. A. Mahmoud, Founding Director, ICLS, Wesselsstraat 1, 2571 RV, The Hague, The Netherlands.

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The 10th World Congress of the International Association of Educational and Vocational Guidance will be conducted in Manila at the Philippine International Convention Center from September 1-5.

The theme of the conference is A Collaborative Approach to Guidance Services for Career Development. Those interested should contact Jose R. Vergara, Secretariat, Office of the Director General, National Manpower and Youth Council, P. O. Box 580, Central Post Office, Manila, Philippines.

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Anyone seeking further information about the items should contact The Secretary, AVCC, P. O. Box 1142, Canberra City, ACT, 2601; or write direct as indicated.

published many books and articles covering a wide range of topics in Logic, Metaphysics, Epistemology and Philosophy of Psychology.

He and his wife, Stephanie, visited the University of Wollongong last year and the Department of Philosophy is delighted to be able to welcome them again.

The seminar will be held at 2.15p.m. in Room 1016, Social Sciences Building, North Wing. Enquiries can be directed to the Philosophy Department Secretary, Room 1018, Ext. 427.

Norgard chairs Careers Council

Mr. John Norgard, Chairman of the Australian Broadcasting Commission, has been appointed as part-time Chairman of the Graduate Careers Council of Australia for a period of three years. He took up this appointment on Tuesday, July 1.

At the same time the management of the GCCA will change following its reconstitution by its two sponsoring bodies - the Australian Vice-Chancellors' Committee (AVCC) and the Australian Conference of Principals of Colleges of Advanced Education (ACOPCAE).

The GCCA will comprise a part-time Chairman, one nominee each from the AVCC and ACOPCAE (Professor J. F. Scott, Vice-Chancellor, La Trobe University, and Mr. R. Cumming, Director, Caulfield Institute of Technology), two careers advisers, one representing the universities and the other the colleges of advanced education, and one nominee each from the Confederation of Australian Industry, the Commonwealth Public Service Board, and the Department of Employment and Youth Affairs.

The main purposes of the GCCA are to assist the activities and promote the development of careers services in universities and colleges. It disseminates information on careers, careers choices, employers, employment opportunities, and opportunities for postgraduate work. It also gathers information on the first destinations and later careers for graduates, and seeks to expand employment opportunities for graduates. One of its aims is to promote liaison between universities and colleges on the one hand and employers on the other, including top management as well as those directly responsible for recruitment and personnel development, and including employer organizations as well as individual employers.

Mr. Norgard was appointed Chairman of GCCA following a review of the GCCA's activities over the last three years.

In 1976 Mr. Norgard was appointed by the Commonwealth Government to chair an inquiry into the Commonwealth Employment Service. He has been Chairman of the Metric Conversion Board since 1970.

Mr. Norgard was a member of the Council of La Trobe University from 1964 to 1978 and was Deputy Chancellor of that University from 1972-75.

SCHOOLS EXPLORE UNI

Student numbers on the University of Wollongong campus swelled visibly on July 18 as high school students from many parts of the region poured in to explore departments.

Held each year, the University Schools Day provides Year 12 students with the opportunity to take a first hand look at the facilities the University has to offer and to hear about subjects.

The University's Schools Liaison Officer Mr. Tom Moore said students from many high schools in Wollongong, the South Coast, the Macarthur region and southern Sydney areas were among the visitors. Prospective mature age students also attended.

He said the day was invaluable for enabling students to make better informed decisions about courses they wished to take and so avoid having to unravel mistakes at a later date, mistakes which could affect scholarships and course completion dates.

During the day, students took part in academic introductions, listened to talks on career planning by the University Counsellor and finance by a representative of the Tertiary Education Assistance Scheme.

Schools Liaison Officer Mr. Tom Moore describes activities offered by the University of Wollongong on Schools Day, to a group of high school students. The Year 12 students came from many schools in the region to explore the University and think about their future study choices.



In January, at the invitation of Professor Rene Derolez of the Department of English Language, I was a guest lecturer at the University of Ghent.

The purpose of my visit was to lecture on Australian English. As the study of Anglo-American is an integral part of the English Language curriculum at Ghent, staff and students alike were interested to learn about another major regional dialect of English. During various informal sessions I was closely questioned and carefully listened to - both for sound and content! When I left, some of my hosts were already considering researching into as yet unsolved problems in the history and development of antipodean English. Particularly intriguing to one group, already working on intonation patterns, was the frequent occurrence of a rising intonation in statements where British English does not have this and they were quick to detect this characteristic creeping into my own speech habits.

Two formal lectures were scheduled and I delivered these to an audience composed of staff and students of the English Language Department and various members of the Faculty of Humanities. The idea for my first lecture, entitled **Australian Attitudes to Australian English**, came to me as a result of teaching Australian English here and of

Flemings enjoy 'Aussie' English

experiencing so much difficulty in keeping the subject in the University's **Calendar**. I dealt with the approaches taken by various Australian linguists to study of their own language and also with their record of the preconceived notions and defensiveness they encountered among their own students and among Australians generally. What I had to say about the average Australian's uncertainty in linguistic matters evoked a sympathetic response from my Flemish audience; Flemings, though long noted for their innate linguistic flair, are often self-conscious about their own language, having something of the same attitude towards the Dutch as Austrians have towards speakers of so-called 'Received' British English. My second lecture, on **The Characteristics of Australian English**, was also received with

By Doreen Gillam,
Senior Lecturer in
English Language.

great interest and led to vigorous discussion afterwards, on such topics as: the influence of migrant communities on linguistic development, the reasons for the absence of distinct regional dialects within Australia, the social implications of the recognised categories of Australian English, and its syntactic and morphemic divergences.

My stay in Ghent was a memorable and rewarding experience, made entirely pleasurable by the welcoming hospitality of Professor and Mme Derolez and the Secretary and staff of the English Language Department. I should be ungrateful if I did not also mention the help and encouragement for my trip that I received from Wollongong: from Professor Southall, who supported the introduction of the study of Australian English into the English Language curriculum; from Rod McConchie (on leave in England at the time) who travelled to Ghent to attend my first lecture; from Noel Meddows who sang and taped Australian songs and poetry for me; from my students who patiently rehearsed a pommy New Chum until she could be trusted to reproduce the Broad Australian Diphthongs with fair dinkum accuracy. My Australian Language students had the final, happy inspiration that I should model clothes made from Australian wool while in Ghent. These were designed and made for me by Mrs. Evelyn McKinnirey. I wore them with great pleasure, carrying my swag and talking Strine, feeling an Old Hand at last!

Facilities grow for disabled

The University of Wollongong has been progressively improving the physical facilities to provide handicapped people with better access.

With the most recently completed building on campus, the Social Sciences building, the design was in accordance with Australian Standard AS1428 of 1977 (Design Rules for Access by the Disabled).

The disabled also have reasonable access to the library, the main lecture theatre block and the Union Building. Ramps and kerbs have been introduced into new areas. The work that remains to be done includes the provision of better facilities in the older sections of the campus.

Currently, consideration is being given to the Beasley/Glencross report as to whether the University can offer adequate facilities in respect of any particular courses to disabled students. One constraint is that the only accommodation at Wollongong, International House, was built before the need for necessary physical facilities was appreciated.

Assisting to meet the needs of disabled people in universities and other tertiary education institutions is Project MIND (Meeting the Information Needs of the Disabled) which is an effort on the part of University and College Libraries Section of the Library Association of Australia to promote the improvement of information services to the disabled.

The Association has asked for representatives from universities - one disabled student, one library staff member and one academic staff member - to join the MIND contact panel. The contact panel members will form the nucleus of MIND activities both in their institutions and in their state and also contribute to a national exchange of information.

It is considered of vital importance that the work of Project MIND should be strongly influenced and guided by people who have personally experienced disability. The project actually began with a suggestion by Dr. Pierre Gorman (Senior Research Fellow in the Faculty of Education at Monash University and formerly librarian and information officer of the Royal National Institute for the Deaf, London), himself deaf from birth. Dr. Gorman and several other disabled people are key members of the central MIND working party.

Interested people are invited to write C/- Library Resource Centre, Prahran College of Advanced Education, 142 High Street, PRAHRAN, 3181, Victoria.

Wheelchair races, mouthpainting and audi-ball games, are just several of the activities which have been organised as part of a "Hop, Skip and Bump" games program to be held at Wollongong University on Wednesday, August 6.

The event, which is part of the University's Commemoration Week activities, is designed to launch the Illawarra Handicapped Persons' Trust Payroll Deduction Scheme at the University and W.I.E. and aims to raise community awareness in a positive manner as to the abilities and difficulties of disabled people.

The Department of Sport and Recreation has created special games and the S.R.C. has organised participation and is making all the general arrangements.

It is hoped that students and staff from Wollongong University and Wollongong Institute of Education, together with members of the disabled population of the Illawarra region will participate.

The Illawarra Handicapped Persons' Trust has been in existence since 1974 and is now established as a co-ordinating, fund-raising and fund allocating body. Its membership of 21 local organisations is varied and includes The Smith Family, Greenacres, Wollongong Crisis Centre, Royal N.S.W. Institute for Deaf and Blind Children, Logbridge Farm and the Illawarra Physically Disabled Sport and Social Club.

Employees at A.I.& S., Tubemakers of Australia, Harbisons ACI, Coalcliff Colliery, CMU members and Wollongong Hospital, contribute to a Payroll Deduction Scheme which allows the Trust to fund Illawarra-

Fun for all with 'hop, skip and bump'

based projects such as assisting in establishing group homes (Greenacres, Aid Retarded Persons); the expansion, in co-operation with the Wheelchair and Disabled Association, of the Human Resource Centre, Balgownie, to a multi-diagnostic activity therapy centre; establishing the first long-day care centre in Wollongong (Kenny Street Neighbourhood House); and underwriting independent living situations for intellectually disabled persons.

However, because of lack of government subsidies, the Trust sees as vital the expansion of the Payroll Deduction Scheme, to obtain funds for further projects to assist the handicapped people of the Illawarra region. These funds are urgently needed to provide assistance for physically, intellectually and socially handicapped people.

The Trust is currently inviting all members of staff at the University and the Wollongong Institute of Education to participate in their Payroll Deduction Scheme.

Geology Prize Night

Exploration Manager of Esso Australia Mr. R. T. Fetters was guest lecturer at the Department of Geology Prize Night held this month.

Mr. Fetters' lecture was entitled "Profile of an Energy Search Programme." He has had extensive experience of oil exploration and production in the U.S.A. and Malaysia and now manages the exploration effort of Esso Australia. Esso Australia made discoveries of oil in the Gippsland Basin which are chiefly responsible for Australia's current two thirds self-sufficiency in oil. Among other activities the company is currently drilling on the Exmouth Plateau in water depths of over a thousand metres and more than 100 kilometres off the coast. With two Australian companies Esso may move to develop the Rundle oil shale deposit at a cost which may reach

\$10 billion. Gippsland brings profits and Exmouth and Rundle large expenses. The long term success or failure of programmes such as these have determined, and will continue to exert a major influence over, our standard of living.

The prize night was attended by 60 people and the welcome was given by the Vice-Chancellor Professor L. M. Birt.

Prizes were presented to John Christopher Campbell (1980 B.P. Australia Ltd. Coal Geology Prize); John Christopher Campbell (1979 A.J. & I. Waters Prize for Geology); Linda Lea Ingram (1979 The Foundation Prize for Geology).

The 1979 Australian Institute of Mining and Metallurgy (Illawarra Branch) Geology Prize was also announced as having gone to John Boddington. This prize will be presented in August.

In the June issue *Campus News* published a statement by The Federation of Australian University Staff Associations (FAUSA) which criticised the Tertiary Education Commission's Working Paper on the Supply and Demand for New Teacher Graduates in 1980s. The statement resulted in correspondence between the Chairman of TEC, Professor P. H. Karmel and President of FAUSA, Dr. P. Darvall. By request from both organisations, that correspondence has been made public and appears in *Campus News* below.

Dr. Peter Le P. Darvall,
President,
Federation of Australian University
Staff Associations,
499 St. Kilda Road,
MELBOURNE. VIC. 3004

Dear Dr. Darvall,

I received earlier this week a copy of the FAUSA Media Release concerning the paper by Dr. Turner on the Commission's Working Paper on the Supply of and Demand for New Teacher Graduates in the 1980s. I am writing to provide the following comments on the statements and claims in the Media Release.

First, The Media Release states that "Dr. Turner strongly criticises the TEC's use of population projections", and quotes Dr. Turner as saying -

"In this area the projections used by the TEC do not assume the continuation of well-established trends, but, in fact, assume a reversal - a decision based at least as much in hope as logic."
(Paragraph 90).

The population projection used by the Commission was produced by the Australian Bureau of Statistics (*Series A, Projections of the Population in Australia, 1978 to 2011*, ABS, June 1978). It is certainly true that this projection assumes a reversal in the established trend of a declining fertility rate, but it is the projection commonly used for government planning. It is worth pointing out that the use of a population projection which does not assume a reversal of the continued decline in the fertility rate would result in school enrolments, and hence a demand for teachers, which were lower than those projected in the Commission's Working Paper; the Commission's demographic assumptions are, if anything, likely to overstate teacher requirements.

Second, the Media Release draws attention to Dr. Turner's statement that, beyond 1990, a logical extension of the TEC assumptions, at least in the secondary sector, "Would make the continued application of the strategy a disaster as a basis for staffing schools. Unless, of course, very large numbers of teachers were recruited from overseas. . . .". This assertion is based on the following statement in Dr. Turner's paper:

"However, at this point it is asserted that if the TEC Working Paper is willing to assume that there will be such an increase in primary school enrolments in the later 1980's and from its strategy for teacher supply at least partly on this basis, it must be equally willing to admit that secondary school enrolments must also subsequently increase but with the profile of increase moved approximately five years later in time."
(Paragraph 39).

In order to arrive at the above conclusion Dr. Turner has carried the Commission's projections a further ten years beyond 1990. In the Working Paper the Commission deliberately limited its scope to the next ten years for two reasons, both clearly stated in the preamble. First it is stated that -

TEC, FAUSA CLASH ON PREDICTION FOR 1980s

"The assessment has been undertaken to assist planning for the 1982-84 triennium. The predictions made in this assessment beyond 1984 are important in the strategy adopted in determining the number of teacher graduates in the short term." (emphasis added).

The Commission did not attempt to go beyond 1990 as projections beyond that date can have little practical bearing on planning for the 1982-84 triennium. Moreover, as it makes clear, the Commission is conscious of the "uncertainty associated with movements in the parameters that govern teacher supply and demand" and for this reason too did not consider that it was either necessary or appropriate to extend the projection beyond 1990 at this stage. The Commission would have no difficulty in accepting Dr. Turner's argument that, given the increases in primary enrolments allowed for in the Working Paper, secondary enrolments would increase in the first half of the 1990s and that if the projection had been extended, higher intakes into secondary pre-service courses in the latter half of the 1980s would result (but certainly not in the first half). Thus, while Dr. Turner's observations are logical, they are irrelevant to the clearly stated purpose of the Paper.

Third, in the Preface to Dr. Turner's paper, and as quoted in the Media Release, Dr. Bessant claims that the critique "reveals a serious situation. One of the nation's most prestigious educational bodies has issued a document which has basic errors in its calculations . . .". The errors which Dr. Turner claims to have identified are:

- (i) The intake numbers for pre-service primary teacher education courses in Table 9 of the Working Paper cannot be reconciled with the stated supply numbers and the stated student completion rate of 82 per cent (paragraph 13);
- (ii) The enrolments in pre-service primary teacher education courses in Table 10 of the Working Paper cannot be reconciled with the Working Paper's assumptions even when allowance is made for the error noted in (i) (paragraph 25); and
- (iii) The enrolments in pre-service secondary teacher education courses in Table 10 of the Working Paper cannot be

Continued Page 12

GEOLOGY HO FUTURE EN

The study of Geology is perhaps more critical now than at any other time in the history of human achievement.

As Professor A. Cook, Chairman of the Department of Geology says, the resources of Western civilisation are based on the fruit of geological endeavour and at the rate at which these resources are being used up, the only possible way to replenish them is by geologically-based prospecting methods. Without the knowledge supplied by geologists Western civilisation would undoubtedly grind to a devastating halt. The future may hold economically viable alternatives to the energy crisis but in the meantime geologists are the starting point for making sure the earth's resources are recovered and most effectively used.

At the University of Wollongong the Department of Geology is particularly concerned with energy sources as they occur in the region. Part of the departmental research is funded by NERRDC, and concerns the study of coal and its most effective uses. Funding has also been granted for research into oil shales.

Professor Cook has been teaching geology in Wollongong since 1964. A graduate of Cambridge University he followed several geological trails before settling down to teach, including a stint with CSIRO and the Joint Coal Board. He came to the university as a lecturer the year after geology was first offered when the then tiny sub-department shared a typist and technical officer with the Department of Metallurgy. The department now has a Chairman, Professor Cook, Senior Lecturers Dr. Richard Facer, Dr. Brian Jones and Dr. Tony Wright, Senior Tutors Dr. Bryan Chenhall and Mr. Paul Carr, Professional Officers Mr. Aivars Depers, Mr. Agu Kantsler, Mr. Neil Sherwood and Technical Officers Mr. Terry Thew, Mrs. Rosalie Varga and Mr. Brian Watson who work with Senior Technical Officer Mr. David Martin. The department's Secretary is Mrs. Heather Bunyan.

Professor Cook said he had decided to be a geologist when he was 12 years old and he still has specimens from his original collection. Professor Cook's research interests centre around organic petrology (coal, oil, natural gas, oil shales, cokes) and mathematical geology. He takes a keen interest in his students but holds that even in the current minerals boom it is "a risky business" to be



Professor A. C. Cook

trained as a geologist because there is no guarantee of employment in four years time. At present, though, there is a dramatic shortage of geologists so "only the very dedicated stay on for post-graduate work." The rest take their pick of plum jobs.

One of the most recent courses offered by the Department for graduates is the Diploma in Coal Geology, a course believed to be unique in the history of Australian universities in that it is given half in each of the University of Wollongong and Newcastle. The department finished teaching the first Wollongong section at the end of the mid-year break and in January the students will go to Newcastle, doing projects and completing examinations in the meantime.

Vacancies for graduates in geology were running at an annual rate of over 2000 earlier this year which is about 10 times the graduation rate. The problem is that the level of activity in the mineral exploration industry fluctuates so rapidly that a student entering university in 1980 cannot be sure of a job on graduating in 3 or 4 years time. However the build up of mines (coal, iron ore, base metal and dare one mention it uranium) over the next few years should tend to stabilize recruiting patterns at a fairly high level. Certainly the move to resources based industry means that geology will provide some of the best employment opportunities for science graduates.

Although Professor Cook maintains that being a geologist is a full time occupation he does have a few other interests such as gardening, cricket, music and laying concrete ("Which is what I happen to be doing at the moment. . ."). The latter would, no doubt, come under the description of adding to the general sedimentation of the area. . . He is married with two children who just happen to have a few rocks as special pets.

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Dr. Richard Facer, Senior Lecturer, can always be recognised by the white coat he wears around the department day and night. His attachment to this professional attire recently inspired other department members to acquire their own white coats, the most impressive having been given the "W. C." Award. Dr. Facer is also very obviously attached to the study of geology which for him was a second discovery.

"I was going to become a physicist, inspired by Harry Messel and his summer schools. But then I took geology as a fourth subject, in first year never having done it before, and found that it stuck," Dr. Facer said. He went on to graduate from the University of Sydney doing a double major in the Department of Geology and Geophysics. After doing some geological exploratory work for the Snowy Mountains Authority he came to Wollongong in 1968 as a tutor, completing his PhD from the University of Sydney while here.

Dr. Facer regards research as a fundamental part of effective teaching and he thoroughly enjoys both these aspects of his academic life. His research interests are primarily the physical (magnetic and thermal) properties of rocks. He has applied this work to the study of coal basin rocks looking for (i) coalification history; (ii) structural relationships of coals; and (iii) the state of strain in the coal. Dr. Facer has also had in his charge the department's diamond drill hole. In addition to staff from the department, the core removed from the hole has already been examined by five visiting geologists and is expected to attract many more.

When he's not around the campus in his white coat, Dr. Facer can be tracked down at home discussing dinosaurs with his children (two), migrant education with his wife, Beth, who is studying for her Masters degree, or working in the garden amongst his vegetables

DS KEY TO RGY NEEDS

Members of the Department of Geology (from left) Senior Technical Officer Mr. David Martin, Senior Lecturer Dr. Richard Facer (back), Senior Tutor Mr. Paul Carr, Technical Officer Mrs. Rosalie Varga, Department Secretary Mrs. Heather Bunyan, Technical Officer Mr. Brian Watson, student Miss Linda Ingram, Senior Lecturer Dr. Tony Wright, Senior Lecturer Dr. Brian Jones and (seated from left), Professional Officers Mr. Aivars Depers and Mr. Neil Sherwood and Technical Officer Mr. Terry Thew.



and Australian native plants. His interest in the latter led him to give talks to Botany departments during leave in Canada.

* * * * *

Dr. Brian Jones, Senior Lecturer, has taught in the department since 1974 and lists geology as his only interest. He has not swerved from his academic path since the beginning of secondary school when he decided geology was to be his life's work. A graduate from the University of Auckland with a PhD from the Australian National University, Dr. Jones sees practicality and plenty of initiative as essential qualities in a good geology student. His research interests lie in sediments and sedimenting rocks, i.e. rocks that have accumulated as layers on the surface of the earth. Since his research involves a good deal of field work (as do most geological pursuits), walking could be regarded as a legitimate "outside interest." Married, with two daughters (who collect rocks) Dr. Jones did admit to the "occasional game of squash."

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For Dr. Tony Wright, Senior Lecturer, life includes mapping rocks, and collecting and studying fossils which he thinks has it all over worrying about bits of soap and buses.

"I once thought I was going to be a chemist but after working for a while for Lever Brothers in Sydney I discovered I couldn't face a life of soap and bus scrambles. . ." Dr. Wright said. With geology he discovered he would not be stuck behind a desk and has since found the geologist's life of outdoor exploration most exciting.

A graduate of the University of Sydney, Dr. Wright came to Wollongong in 1971. Before that he lectured for 4 years in New Zealand at Victoria University of Wellington, and spent a year doing research and teaching at Oregon State University, U.S. His main research interests are the early Paleozoic fossils of New Zealand and the fossils and evolution of the Capertee Geanticline, a somewhat obscure and poorly understood area of N.S.W. which was once an island arc - like structure.

Dr. Wright does have a few interests that depart from geology - he raises sheep for fleece which is spun by his wife, Rosemary, he plays Bridge and helps to raise three children.

Dr Bryan Chenhall, Senior Tutor, graduated from Sydney University and teaches igneous and metamorphic petrology. Just at present he is probably communing with a horde of Norwegian mosquitoes as he hunts for some Nordic granites while on study leave. Chiza plays hock, is a stubborn left hand batman and bowls a deceptive leg break. His research concentrated on the serpentinite belt near Tumut N.S.W., and on the metamorphism of the Wilyama Complex at Broken Hill. Dr. Chenhall thinks that the word Complex is appropriate but considers he has managed to sort out a few of its complexities and then add a few more.

* * * * *

Professional Officer Agu Kantsler can be described as a "total product" of the Department having graduated from the University

'Dedicated few stay on...'

of Wollongong in 1973, worked as a Professional Officer in 1974, been a full-time PhD student from mid-1975 to 1978 and then back as a Professional Officer to the present day.

He is one of the dedicated few who could not be enticed away from post graduate studies by any tempting offers from private industry or anyone else seeking geological expertise. His big hope for this year is to finish work on his PhD which he is doing on the thermal history of sedimentary basins in Australia. This work, and other research work within the department has taken Mr. Kantsler to most parts of Australia on field work and also to present papers - 13 in all, during the last two years.

His research work has been mostly in the field of organic matter in sediments particularly the petrological aspects which relate to the search for petroleum.

"With this research we have, to some extent, tried to pull away from the specialist field and back into the mainstream of geology, and at the same time inject new concepts into classical geology," Mr. Kantsler said.

Married, with one daughter, he likes to spend his spare time re-building old houses. He is a keen year-round surfer.

* * * * *

Senior Tutor Mr. Paul Carr is another dedicated geologist (the occasional game of social squash is his only diversion) who joined the department in 1973. His work as senior tutor keeps him busy with first, second and third year students and the rest of the time he is working on his PhD. Mr. Carr graduated from the University of Queensland in 1973 and then worked for private industry as a consultant for six months before deciding on a university post. His area of research is igneous petrology, i.e. rocks that have crystallised from melts (e.g. basalts, granites), especially igneous rocks in the southern Sydney Basin. He determines the evolution of those rocks by ascertaining their ages, mineralogy, texture and chemistry. If that sounds complicated it could well explain the need for the dedication mentioned earlier. Mr. Carr is married (his wife Margaret, is a physics teacher in Secondary School) and lists squash as a hobby.

* * * * *

Professional Officer Mr. Aivars Depers spends his time working on coal research under the guidance of Professor Cook and working towards his PhD where his interest in the geochemistry of sediments, with special emphasis on Lake Illawarra and the accumulation of sediments and pollutants. Mr. Depers has presented some of his PhD work at the last triennial conference of the International Association of Sedimentologists in Israel in 1978.

His special concern in the department is his "toy," the Image Analyser, a complex piece of equipment which yields mathematical data on micro-structures within coke, which can lead to the establishment of the combination of coal which yields the coke of the best strength (e.g. for use in blast furnaces). Settling the Image Analyser down (it arrived in June) has been "lots of fun," according to Mr. Depers.

On outside interests Mr. Depers doesn't do too badly - he was married in June (not to the Image Analyser, likes music, reads extensively, plays competition squash and cricket for the University, Aussie Rules football, swims and body surfs, although with the latter he finds Wollongong waves a bit big for comfort.

* * * * *

Canadian-born Neil Sherwood decided to work for the department as a Professional Officer while on the move. He's been travelling around since graduating from the University of Manitoba (Canada) in 1977, working in ski resorts in Europe and then coming on to Australia. Mr. Sherwood says he'll be around for a while yet doing a Master's degree part time while assisting with departmental research on oil shale. His research area is "Aspects of Organic Matter in Oil Shales."

His personal interests are skiing (of course), tennis, canoeing, squash and music.

Senior Technical Officer Mr. David Martin is quick to declare he knows "nothing about geology" but that hasn't stopped him from becoming an obviously vital part of the department.

He came to the job three years ago with some curious qualifications - marine fitter, radio mechanic, senior aircraftsman and structural mechanical draftsman. And his original reason for coming to Australia (to Melbourne in 1963) was to play professional soccer for a club. A somewhat winding route through BHP eventually brought him to Wollongong and to the department which he views as his "permanent niche."

"I'm settled here and I like it - I draw maps, geological ones of course, do design work and service the microscopes," Mr. Martin said. He also organises work schedules for other technical officers and plays golf in his spare time. He is married with two teenage children.

* * * * *

Technical Officer Mrs. Rosalie Varga is practically a foundation member of the department after nine "very interesting" years there. The years were so interesting in fact that she is about to graduate as a Bachelor of Science.

"I was talked into it by my husband who is a technical officer in the Department of Physics and Professor Cook who likes to see his staff advance," Mrs. Varga said. She is in her third year now with no regrets and still "does everything" around the department - prepares material for microscope work, mounting and polishing coal samples, Looks after the coal teaching collection and does all the purchasing for the department. Then there's book-keeping, accounting, general stores and dark room work.

The Vargas are a real "University family" with their eldest daughter working in the Department of Mathematics and their other daughter an AIS trainee in computer science now attending University full time.

At Christmas time Mrs. Varga and her daughters are looking forward to a very special occasion - a visit to their native Hungary to see relatives and taste the Hungarian winter and goose liver.

* * * * *

A new member of the department, Mr. Brian Watson looks after a lot of the sophisticated analytical equipment as well as assisting in various research projects. Mr. Watson graduated with a Bachelor of Science degree, majoring in Chemistry, last year and will be following up two and a half years of Geology while with the department. He has an eye on honours in Geochemistry but is taking a year off personal study this year to "enjoy his newly married state," there's plenty of togetherness since his wife, Sharon, works in Student Administration.

Amongst Mr. Watson's equipment charges are X-ray diffraction machine, an X-ray fluorescence machine, and an Atomic Absorber (AA) machine, to mention just a few. Unfortunately space does not permit a full and frank description in Campus News of how these beauties work, but Mr. Watson would be more than delighted to explain all to any interested readers. . . just put on a white coat and head for the department.

In his spare time Mr. Watson enjoys surfing, skiing, squash, tennis, cricket, is interested in soccer and plays the guitar.

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Technical Officer Mr. Terry Thew has been two years with the department and is thinking about studying science. In the meantime he prepares some research material and assists students in the art of making sections (samples for study). Before coming to the University of Wollongong he gained an Engineering Certificate from Wollongong Technical College and worked for AIS for four years. Married with an eight-month-old baby (his wife, Jenny is secretary in the Department of Physics), being a full-time student is only "a question of finances."

No description of the Department of Geology would be complete without some words about Mrs. Heather Bunyan. According to Professor Cook, Mrs Bunyan, the departmental secretary, is a modern day miracle worker, especially in the field of typing research papers. Some of them are as thick as books, complicated and require painstaking work. Mrs. Bunyan has worked on 79 of these (with re-types) over 10 months. She works the first word processor in the University and has, altogether, "a phenomenal output." Her own modest assessment of her work was "just office duties." Apart from looking after her family of academic rock lovers, she enjoys squash, gardening and loves animals.

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OBITUARY

Evan Raymond Phillips, Associate Professor in Geology at the University of Wollongong, died on the 11th May 1980.

He had undergone major cancer surgery in 1971 and 1979. The second operation had not been successful but gave him a year which he lived in a very full way - he played squash regularly until two weeks before his death, and set some exam questions while in hospital.

Born in 1936 in Brisbane, Evan attended the Brisbane State High School and then the University of Queensland at St. Lucia. After completing the pass degree course he took an honours degree, following the then accepted pattern of a two year part-time course, employed by the Department as a part-time Demonstrator. He graduated with Honours First Class and stayed at the University studying a large granitic mass at Undercliffe Falls near the N.S.W. - Queensland border for his Ph.D. degree. This location, near Wilsons Downfall, caused some problems since the return with his rock samples had to be negotiated through the quarantine gates first into and then back out of N.S.W. During his higher degree studies Evan held a number of short term appointments, including a temporary lectureship in 1963 following the death of his friend and mentor Dr. Toby Gradwell. This friendship led to the publishing in 1979 of a paper arising out of Gradwell's work in which Gradwell was listed as a co-author in a gesture typical of Evan's generosity.

His Ph.D. was completed while working as a Senior Tutor-Demonstrator at the University of Sydney in 1964-68. He joined the then Wollongong University College in 1968 as a lecturer and played a major role in developing Geology at that institution from a servicing role to a full Department offering honours and postgraduate degrees. He was promoted to Senior Lecturer in 1971 and to Associate Professor in 1974. With the granting of autonomy to the University of Wollongong in 1975, Evan took an active part in the administrative life of the University, being at various times Acting Chairman of Department, Chariman of the Faculty of Science, Chairman of the Graduate Studies Committee and member of the Academic Senate.

Evan's research was concentrated on granitic and gneissic rocks, and his work in the Undercliffe Falls district led to his long-standing interest in feldspars and myrmekite. Related research on Broken Hill gneisses was supported by grants from the Broken Hill Mining Managers' Association and more recently his work was supported by grants from the University of Wollongong. This led to a series of general propositions concerning the petrogenesis of myrmekite. A number of his 37 papers bear testimony to his generous and close cooperation with colleagues and students. In the Department at Wollongong Evan was instrumental in setting up AAS, XRD and XRF analytical equipment.

With Evan's death we have lost a friend and colleague, the science of Geology has lost an able petrologist and a teacher who was able to communicate, to each and every student, a concern for science as a necessary and desirable part of the modern world. He is sadly missed by his wife Shelley, and his brother and mother, his colleagues and students. By A.C.C., A.J.T.W..

STURT: A NEW INSIGHT

Most Australians have, at some stage of their schooling, learnt that Charles Sturt "solved the problem of the Western Rivers." Few of us, however, know anything of the person and motivation of the man whose exploration earned him such a prominent place in our history.

Much of the previously missing background of Charles Sturt has now been provided in a book published recently and written by a member of the Council of the University of Wollongong. Dr. Edgar Beale's *Sturt: The Chipped Idol* (Sydney University Press, 1979) highlights Sturt's obsession for recognition and the ways in which this particular trait led to his undertaking journeys sometimes ill-advised, and often inadequately prepared journeys, and with a frequent disregard for those travelling with him. Indeed, the oft-told story of Sturt being borne towards Adelaide upon a stretcher at the end of his final journey, suffering from malnutrition and blindness may well have been a realisation of a type of martyrdom in keeping with the proud streak within Sturt's nature.

'Reliable witnesses'

Historical figures are invariably the subjects of questioning, posthumous reviews. However, not all such reviews are as thoroughly documented or as initially well-received as Dr. Beale's portrayal of the achievements of Sturt. An early review by Brian Dickey, writing in *The Australian*, describes *Sturt: The Chipped Idol* as a "major reinterpretation. . . not intended as a vicious or biased assault. . . a careful search for reliable witnesses and a balance of probabilities." Dr. Beale's study of Sturt is not deliberately iconoclastic; rather, it provides valuable information supplementing a chapter of Australian history which, for nearly 150 years, has been based upon a few bare facts, many of which have now been formed on analysis to be seriously distorted or even invented by Sturt.

The Literature Board of the Australia Council has given Dr. Beale a grant to further his studies of Charles Sturt.

Dr. Edgar Beale is a descendent of one of the earliest families to settle in Illawarra, and has for many years practised law in Wollongong. His interest in matters historical has already led to a number of publications by him, including *Kennedy of Cape York* (Adelaide, 1970), and the text of the well-known *Illawarra Sketchbook* (Adelaide, 1976). Dr. Beale has been an active supporter of the expansion of tertiary education in Illawarra, and has served on the University's Council since its inception in 1975. In 1977 the University gave official recognition to Edgar Beale's contribution to scholarship by conferring upon him the degree of Doctor of Letters.

Dr. Beale has donated a copy of *Sturt: The Chipped Idol* to the University Library.

'Working paper part of future plan'

Continued from Page 7

reconciled with the Working Paper assumptions (paragraph 25).

In relation to the first of these, the Commission had, in discussions with Dr. Turner on 9th April, already acknowledged that reconciliation of the intakes with the desired supply of graduates is only possible if a student completion rate of 85 per cent is used (and not 82 per cent as stated in the Paper) and if intakes for the three year course are tabled one year earlier than they were in the Working Paper.

The second and third "errors" identified by Dr. Turner are not errors. Dr. Turner has assumed that the enrolments have been derived from a linear interpolation between intakes and graduates. In fact, the Commission used a year-by-year progression rate method (the product of the yearly progression rates given the overall course completion rate) and application of these rates produces the figures set out in the paper. This had been brought to Dr. Turner's attention a fortnight prior to the FAUSA release of his critique of the Working Paper - however, no attempt has been made in the released version of the critique to correct Dr. Turner's assertion that his inability to reconcile the figures constituted errors in the Working Paper.

Fourth, in the Preface to Dr. Turner's paper, Dr. Bessant states:

"There are still a number of matters for possible inclusion e.g. (i) the actual and future interaction of supply/demand for TAFE teachers and for school teachers. Does the TEC paper take this into account at all or adequately? (ii) the implications of the TEC paper for individual states. The paper quotes national figures and does not consider state variations. It assumes a ready transfer of teachers between states."

The Working Paper does not purport to take account of TAFE teacher training; it should be clear that the major concern of the paper is pre-service primary and secondary teacher training. The training of TAFE teachers is a separate issue and will be taken into account by the Commission as such. Similarly, in relation to the second point raised by Dr. Bessant, the Working Paper made no claim to have examined the situation in individual States. The preamble clearly states:

"The assessment is on an Australia-wide basis. The trends - and the implications - identified for Australia as a whole will differ in impact from State to State."

Fifth, in his Preface Dr. Bessant goes on to claim that:

"It is even more serious when this document is used throughout Australia as the excuse to justify cuts in finance for teacher education, to dismiss staff and to cut the number of students in training (and as a result to reduce the opportunities for tertiary education)."

The Working Paper was prepared and circulated to State co-ordinating authorities for tertiary education, as part of the planning process for the 1982-84 triennium, in response to the Government's request in the *Guidelines for Education Commissions 1980-82* that:

"... the Tertiary Education Commission should continue to monitor carefully the use and allocation of resources, particularly in the area of pre-service teacher education to ensure as far as possible that the supply of manpower is in reasonable relationship to demand."

It is not an excuse justifying "cuts in finance for teacher education," but rather it is a preliminary step in the process of identifying possible adjustments in resource allocation which may be necessary

in the future. As planned when the original Working Paper was made available to State authorities, officers of the Commission are now undertaking an analysis on a State basis with parameters which take account of reactions to the original Paper, and will include the sensitivity of the results to variations in the parameters. The State analyses will assist the Commission in preparing Volume 1 of its report for the 1982-84 triennium.

Sixth, there is one assertion in the "Summary of Critique" which has not been covered by my earlier comments:

"One particular argument of importance is that the proposed TEC strategy, far from building up a reserve of teachers which could be used flexibly to adjust between times of over-supply and under-supply, is more likely to deplete reserves of employable teachers and create an aggravated and more permanent under-supply situation" (Paragraph 5).

At paragraph 58, Dr. Turner accepts that "... it is likely in each year that at least some persons would be appointed to the teacher work force from sources other than new graduates." However the calculations by which he shows a depletion of the reserve of employable teachers under the Commission's strategy (Tables 11 to 14) apparently ignore the existence of a reserve of qualified teachers at the starting point and the additions to the reserve from those teachers who left the teaching workforce in earlier years and now seek to return.

Seventh, the "Summary of Critique" claims that:

"The potential numbers and potential need for and desirability of post-experience courses and the basis on which they should be provided has been considerably under-estimated and unjustifiably devalued by the TEC."

In discussing the Commission's projections of enrolments in post-experience courses, Dr. Turner calculates that "the upper limit to the potential for post-experience courses is approximately 25,000 per annum (300,000 - 12) rather than the 10,000 suggested by the TEC Working Paper." Dr. Turner's figure represents the potential number of enrolments in post-experience training courses each year. However, Dr. Turner has inadvertently compared this figure with the Commission's estimate of 10,000 EFTS, rather than the figure of 20,000 enrolments shown in Table 10 of the Working Paper. Given that Dr. Turner considers his figure to be "the upper limit," it is difficult to see the substance in the claim.

Finally, in the light of the above, there are two comments which I feel obliged to make. First, it would seem that in its Media Release, whenever a difference between the Commission and Dr. Turner has been referred to, FAUSA has chosen to accept without question that Dr. Turner is right. As you can see from the above, the content of Dr. Turner's paper is subject to dispute. Moreover, FAUSA issued the Media Release and the paper a fortnight after Mr. Arthur had spent over two hours discussing Dr. Turner's paper with him. Dr. Turner does not appear to have responded to the matters that Mr. Arthur pointed out should be corrected in his paper. To have proceeded, without checking with us, in a situation in which there was disagreement about facts, assumptions and inferences seems to me to be not the approach to be expected from an association of scholars.

My second point is one which I greatly regret having to make. A number of comments in your Media Release, including ones quoted from Dr. Turner and Dr. Bessant are insulting to me, the members of the Commission, and the Commission's officers: they

impugn the integrity of all involved. Whether you choose to apologise for this is up to you, but you should know that I believe that the Commission is entitled to an apology.

I have not circulated copies of this letter to the people to whom you have sent the Media Release as I assume that, in the circumstances, you will wish to do so.

Yours sincerely,
Peter Karmel.

'FAUSA still concerned'

Emeritus Professor P. H. Karmel, AC, CBE,
Chairman,
Tertiary Education Commission,
P. O. Box 18,
BELCONNEN. A.C.T. 2616

Dear Professor Karmel,

I have now had the opportunity to discuss your letter of 2 May with Dr. Turner; with Dr. Bessant, the Chairman of the FAUSA Education Committee; and with the FAUSA Executive. I am writing to say that FAUSA is still seriously concerned about the "TEC Working Paper on the Supply of and Demand for New Teacher Graduates in the 1980's."

With Dr. Turner's assistance we have prepared a reply to the points of detail raised in your letter of 2 May, and this is attached; but our general concern goes beyond those particular points.

To summarise, our concern can be broadly categorised under the following main headings:

- (1) The apparent attempt by the TEC to move into detailed manpower planning, a move which appears to be contrary not only to the past policy of the TEC and the Universities Commission but also to the stated policy of the present government.
- (2) The lack of caution surrounding the distribution of the Working Paper so that it did indeed become the basis of attempts to apply immediate quotas on teacher training enrolments in some states.
- (3) The lack of openness on this issue, and in particular the apparent lack of willingness by the TEC to have the teacher training question publicly debated or its findings publicly challenged.
- (4) The use of dubious statistics and the lack of any qualification expressed in the Working Paper about the conclusions drawn from those statistics.
- (5) The assumptions made in the paper about "reserves" of trained teachers and supplies of teachers from "other sources" without evidence that these assumptions are anything more than speculative assertions.

- (6) The failure to take account of the number of trained school teachers who may be absorbed by the expanding TAFE sector and thus not be available for primary and secondary teaching.
- (7) The acknowledged errors in the Working Paper, now that it has seen the light of day - but worse, the fact that if it had not been published, these errors could not have been identified by Dr. Turner and others, and thus might still be unquestioned.

(1) Manpower Planning

The TEC itself has stated on many questions that it does not see its role as that of trying to "fine tune" the tertiary education system.

It seems to be generally acknowledged that attempts at manpower planning through education have not been a success in overseas countries. In his paper prepared for the National Inquiry into Education and Training, Professor John Niland quotes Blaug (1967) who said that:

"... all the evidence shown that we do not yet know how to forecast beyond three or four years with anything remotely resembling the 10 per cent margins of error that are regarded as just tolerable in general economic forecasting. . . indeed, so notorious is the unreliability of such forecasts that there is not a single country on record that has made a serious effort to implement comprehensive targets for manpower requirements."

Niland pointed out that little had occurred in the years since that time to warrant a more optimistic view. Indeed he said:

"... The weight of evidence against national level comprehensive manpower forecasts, particularly in the long and medium run but even sometimes in the short run, is so strong that it would be pure wishful thinking to imagine we could do better than other countries in this area. In point of fact our performance undoubtedly would be even less satisfactory, given that other countries have had a stronger tradition of comprehensive manpower policy, a better data base from which to work, and a much more substantial infrastructure of specialists to perform that work."

Tec role changing ?

In its response to the Williams Report, the government commented on manpower considerations in some detail. In his statement of 22 November 1979, the then Minister for Education Senator J. L. Carrick said:

"In this difficult task of reconciling individual aspirations for education with community needs, the Government will continue to be guided by the advice of the Tertiary Education Commission. The Commission will ask advice from the Department of Employment and Youth Affairs on manpower matters. The Government's approach to determining the pattern of tertiary education will continue to be that in expensive and highly specialised fields of study, decisions on the number of places to be made available will be influenced primarily by manpower considerations. In other fields the Government will, as now, have prime regard to the demand for places from those qualified and wishing to enter particular courses. The Government recognises that education serves

Continued next page

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a plurality of purposes, including its important role in promoting human fulfilment." (our emphasis)

The detailed attempt at manpower planning in teacher education represented by the TEC Working Paper and the immediate and extreme response to that paper in at least two States seems quite inconsistent with this statement - teacher education is clearly not an "expensive and highly specialised field of study."

(2) and (3) A Lack of Caution and a Lack of Openness

The action of the TEC in circulating the Working Paper to a restricted group of State government authorities is not, we submit, consistent with the role of an independent, expert, advisory body in tertiary education. It is consistent with the modes of operation adopted by government departments and it is just such actions which have prompted FAUSA, on occasions in the past, to speculate whether the role of the Tertiary Education Commission is changing in the latter direction. If it is, we may as well have a federal Department of Tertiary Education rather than an independent Commission.

You state that FAUSA's mode of responding to the Working Paper was not that to be expected of an association of scholars. I comment further on that later in this letter, but I believe that if a more scholarly approach is to be taken to the discussion of issues such as manpower planning in education, the TEC should give the lead.

This could have been achieved, in the current circumstances, by the issuing of the Working Paper as a public discussion document with a clear explanatory statement to the effect that it was that and nothing more, and cautioning readers against its use as the basis for any specific action.

It would also have been useful if a more scholarly approach had been adopted in the document itself, which as it stands is singularly lacking in references to source material available outside the TEC's own files; a situation which has made the job of analysis by outsiders more difficult than would otherwise have been the case.

Had a more open procedure been adopted, and the Working Paper released to the education community in general, for discussion purposes only, the TEC would have had available to it, in addition to the opinions of state authorities, considered opinions from the institutions concerned, their consultative bodies (such as AVCC, DOCIT and ACOP), and from staff organisations in the primary, secondary and tertiary sectors. It would then not have been possible for the document to be used prematurely and in a manner which you state was not intended, as evidence to justify cut-backs in teacher education.

It was with further concern that we learnt of discussions between the Universities Council and Vice-Chancellors on possible staff redundancies, in December 1979, and talks between yourself and state representatives touching on the same issues in March this year. So far neither FAUSA nor any of its constituent organisations, nor indeed as far as we know any staff organisation in the college sector, has been informed of any TEC views on redundancies, nor invited to consult with the TEC or its Councils or comment on redundancies in any way.

We should be disappointed, but not surprised, if we learnt of a "TEC Working Paper on Staff Redundancies" when we opened our National Times next week. (I give this as an imaginary example - I am not in any way suggesting that such a document now exists, or that it ever will).

In these circumstances, it is difficult to accept, as you suggest, that FAUSA should have consulted the TEC before releasing its "Critical Comment."

(4) Use of Dubious Statistics

Three matters are of concern to us here:

- (i) Population statistics
- (ii) Wastage rates

No warning on 'over-reaction'

(iii) Pupil/teacher ratios

Population Statistics

The argument on this issue are canvassed in detail in the response by Dr. Turner attached to this letter. Briefly our position is that future population projections are currently so uncertain (as reflected in the provision by the ABS of three different projections with an invitation to the user to select the most appropriate for their purposes) that **great** caution is needed in implementing policy changes based on those projections.

Furthermore, as pointed out by Dr. Turner, another recent statement on teacher supply and demand - the AEC report on Teacher Supply and Demand in Australian Schools 1978-1985 - recognises this uncertainty and cautions against an immediate "over-reaction." As mentioned earlier, no such caution was appended to the TEC Working Paper.

Wastage Rates

Our concern in this area is with what degree of confidence the TEC predicts that the teacher wastage rate in the 1980's will remain at 5.5% for both the primary and secondary areas. Whereas we do not believe that the high wastage rates of the early seventies will occur again, is the TEC at all confident that the wastage rate may not rise to, say, 7.5%, which is still a figure far below any past actual wastage rate, except for 1978 and 1979 (for government schools)?

The TEC can verify that even an error of this magnitude - by only two percentage points in, say, 1983 - would create an additional demand for about 3,700 teachers in 1984 - **an increase of 29% over TEC predictions.**

Pupil/Teacher Ratios

In the past, forecasting of improvement in PTR's has been subject to large errors. Variations in PTR's have been, since the early sixties, a far more important and unpredictable element affecting the demand for teachers than student numbers.

To use a familiar illustration, the Karmel Report of 1973 regarded "the minimum acceptable degree of improvement" in resources per pupil as 40% at primary level and 35% at secondary level by 1979. This resource increase was to be funded by the Schools Commission. In 1975 the Schools Commission proposed that the targets be postponed, and even these amended targets were in effect postponed further in the 1975 Hayden budget.

However as is now well known, the states made massive and unexpected expansions in their expenditures from general revenue. In fact "the real increases in per student expenditure were 50% at the primary level and 38% at the secondary level" in the five years to 1977-1978 in government schools. (Schools Commission, *Australian Students and their Schools*, 1979, P.140).

The TEC Working Paper allows for a total improvement in PTR's at secondary level of about 3% in the period of 1979-85. The annual improvements for the period 1971-78 was greater than this. Even in 1978 the PTR declined from 13.8 to 13.5% or by about 2%.

If a similar decline occurred in, say, 1984 the PTR would be 12.9% rather than the 13.1% projected; annual demand for new teachers would be increased by 1400 or about 18%. On past experience, it seems to us that errors even larger than this are **quite likely to occur.**

(5) "Reserves" of Trained Teachers

This matter is dealt with in some detail in the attached paper based

on Dr. Turner's comments. The central point is, however, the high degree of uncertainty about whether the "reserve" of trained teachers on which the TEC Working Paper predictions rest will actually be available.

Furthermore the "reserve" of trained teachers was part of the Working Paper's assumption that teachers would be available from "other sources," apart from new graduates. But no estimate of the number of teachers available from these "other sources" is given and furthermore the nature of these "other sources" is not specified.

Our Education Committee has reminded us that it was not so long ago that Victoria was flying in American teachers on short-term contracts. We presume that this is not what the TEC had in mind. (Although it is certainly cheaper than training Australians to be teachers!)

Another point also dealt with in the attachment is the TEC's assumption about the ready transferability of teachers between states, which is implicit in an acceptance of its national figures as a true reflection of the sum of the needs of individual states. Experience to date would suggest that such transfers do not readily take place and indeed, in some states, registration requirements would prevent them.

The Working Paper also assumes ready transferability of primary teachers to secondary schools. Again, a knowledge of employment conditions and their history in the teaching profession suggests that such a transfer of teachers, when the numbers were required, would be very difficult to achieve, even if educationally defensible. And in some states, existing requirements and regulations would prevent such transfer.

'No account of TAFE loss'

(6) Teachers Needed for TAFE

Briefly put, our criticism here, which has not been rebutted by the TEC, is that the Working Paper predictions took no account of the loss of trained school teachers to the TAFE sector. Given the expansion in this area and, for some people, the attractions of working in post-secondary education, it seems that this is a significant omission from the TEC calculations. Again it is one which would lead to an understatement rather than an overstatement of the number of teachers required in the 1980's.

(7) Errors in the Paper

This question is also dealt with in more detail in the attachment. Briefly, however, it is undisputed that the TEC made at least one error in its calculations. This consisted of two elements: a figure of 85% rather than a figure of 82%, as stated in the paper, was used for a student completion rate; and intakes for three year courses were displaced by one year.

Dr. Turner still maintains there is a second error in the Working Paper calculations, although this is not admitted by the TEC.

Without going to further details (which are covered by the attached statement) it remains true that a document of great significance was issued by the TEC - and acted upon by two state authorities in a manner which may have long term consequences - when it contained such errors.

What is worse, from our point of view, is that the Working Paper was brought to light only by the announcement of its existence in the "National Times" in November 1979. Had it not come to light in this way it is possible that these errors, at least on which the TEC

admits to, would have been undetected, and predictions for the future made on incorrect computations.

* * * * *

On the basis of what I have set out above, and the further details in the attachment, you will understand my belief that the original Critical Response written by Dr. Turner and highlighted both by Dr. Bessant and in the FAUSA Media Release, remains valid. The debate could have been conducted on more amicable terms if events had gone differently. As it was, however, the direct implication of the Working Paper was to place the jobs of many of our members in jeopardy. We could not be expected to react to that situation: lightheartedly.

FAUSA has as much desire as the TEC to avoid confrontation; indeed the theme of one of its Newsletter editorials last year was that of "Confrontation or Consultation." This was in the context of our dealings with industrial matters, but our concern is equally applicable to our interest in educational areas.

You say that our approach is not one to be expected from an association of scholars. FAUSA is a professional and industrial body committed to promoting the work of Australian universities, preserving their independence and integrity, and promoting the interests, rights and welfare of the members of their staffs. On this occasion it chose to accept the technical advice of Dr. Turner and of members of its Education Committee, whose expertise it trusts in this area. It does not believe that this trust was misplaced.

I now respond to the final point in your letter of 2 May. We had no desire to insult you personally, nor members of the Tertiary Education Commission nor members of its staff. But I believe that our criticism must be seen against the background of our experience with the TEC, and its predecessor, the Universities Commission.

Both bodies had and have a reputation and status which is high - deservedly so - not only in the eyes of the government and the educational institutions concerned, but also generally in the community and in the media. Because of this, notwithstanding that the Commission is first and foremost an advisory body, its pronouncements both formal and informal are accorded weight and publicity sometimes beyond that which they claim, perhaps even that which the Commission experts. Certainly they affect our members directly.

Members of FAUSA have become sensitive about this in the light of past experience. For instance, I could point to the unsubstantiated assertions about fixed-term appointments in the Fifth Report of the Universities Commission - subsequently reinforced not only in other Commission reports but also in public statements by yourself. I could also point to the assertions by the Universities Commission on the application of the reversion rule and statements on the desirable proportion of staff at senior levels, and their subsequent effect on promotional opportunities. The TEC Working Paper on the Supply of and Demand for New Teacher Graduates is only the latest example of this.

I regard it as a proper role for FAUSA to criticise the activities of the TEC when it seems appropriate, and on the basis of the best advice available to it. I am sure you will agree that the Tertiary Education Commission should not be above criticism from time to time.

You say that you assume we will wish to circulate copies of your letter to those to whom we sent copies of the Media Release; although this is an unusual request we have decided to comply with it, and at the same time to circulate a copy of this reply.

We would welcome an opportunity to further discuss this matter with Commission representatives at a convenient time.

Yours,

P. Le P. Darvall
President.



Items for Take Note should be forwarded to Beatrice Henderson in the Development and Planning Office, Room G04, The Hut (Ext. 955).

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.

CALTEX WOMAN GRADUATE OF THE YEAR SCHOLARSHIP: for overseas study for maximum of two years. (September 30, 1980)

U.N.S.W. ART PRIZE & TRAVELLING ART SCHOLARSHIP 1980: (September 1, 1980)

FIRST INTERNATIONAL ESSAY CONTEST: "My Proposals for a Peaceful World in the 1980s" (September 30, 1980)

GOWRIE RESEARCH SCHOLARSHIPS 1981 AWARDS: (January 15, 1981)

AUSTRALIA-CHINA TEACHER EXCHANGE: for the teaching of English as a foreign language. (August 22, 1980)

DARWIN COMMUNITY COLLEGE TEACHER EDUCATION THE GUARANTEE EMPLOYMENT SCHEME: (October 31, 1980)

AUSTRALIAN STUDIES IN JAPAN: for lecturer in introductory social sciences course. (September 1, 1980)

AUSTRALIAN FEDERATION OF UNIVERSITY WOMEN BURSARY: available for short-term study in Canberra during 1980-81 summer vacation. (September 15, 1980)

QUEEN ELIZABETH II FELLOWSHIPS IN PHYSICAL & BIOLOGICAL SCIENCES (August 29, 1980) AND IN MARINE SCIENCES (August 1, 1980)

CONFERENCES, SEMINARS, SYMPOSIA.

Details of the following items are available from the Development and Planning Office, Room G04, The Hut (ext. 955).

AUSTRALIAN POLITICAL STUDIES ASSOCIATION, Annual Conference, Canberra, August 27-29, 1980.

MANAGING IN HIGHER EDUCATION, Workshop Series, Armidale, July 30 to August 24, 1980.

ADULT EDUCATION: 1990 AND NOW, Hawkesbury Agric. College, September 28 - October 2, 1980.

51ST ANZAAS CONGRESS, Brisbane, May 11 - 15, 1981.

RADIOISOTOPE COURSE FOR NON GRADUATES NO. 28, Lucas Heights, November 10 - December 5, 1980.

MULTICULTURAL LITERACY, Australian Reading Association Conference, Canberra, August 25 - 28, 1980.

SYMPOSIUM ON WORD PROCESSING, Australian Institute of Tertiary Educational Administrators, University of Sydney, August 13, 1980.

INTERNATIONAL UNION FOR THE SCIENTIFIC STUDY OF POPULATION, The Philippines, December 9-16, 1981.

INCREASE IN INTEREST RATE

The State Superannuation Board has reviewed the interest rate of 7.5% per annum currently payable on moneys invested in the Voluntary Savings Scheme and effective from 1st June, 1980, the interest rate will be 8.0% per annum, calculated on minimum monthly balances.

Further details may be obtained from the State Superannuation Board, Box 4003, G.P.O., Sydney - telephone (02) 238.2689.

BOOK APPEAL

A collection is now being made for children's books, particularly young children's books, for preschools at Cringila, Bourke and Weipa South in North Queensland. Books may be left with Dr. De Lacey, Education Department.

The Counselling Centre will hold Careers Week from August 18th - 22nd this year for the benefit of final year students. The programme is as follows:

Monday, August 18th:

Treasury
Touche Ross & Co.

Tuesday, August 19th:

Air Force Careers - for both
Graduates & Undergraduates

Wednesday, August 20th:

Peat, Marwick, Mitchell & Co.
Australian Bureau of Statistics

Thursday, August 21st:

Bank of New South Wales

Friday, August 22nd:

Tubemakers of Australia
Department of Industry &
Commerce.

Wollongong and Sydney newspapers now are available from the Union Shop.

Staff and students are reminded also of the Higher Education Supplement in The Australian every Wednesday.

Sept. 24 Against the Escarpment; The Echidna

Oct. 9 At the Edge of the Salt Plain.

Oct. 22 Battling Sea Pollution; Eudyptula minor (fairy penguin)

BIOLOGY SEMINAR

Tuesday, August 19, 1980, 12.30 p.m. Room 134, Metallurgy Building: Dr. B. V. McCleary, N.S.W. Dept. of Agriculture, Biological and Chemical Research Institute, Rydalmere. "Enzyme-Induced Thiamine Deficiency."

ARTS & CRAFTS

Shellharbour Crafts Awards 1980, November 14-16. Prizes being offered for Ceramics, Wallhangings and Carvings.

LUNCH-TIME FILMS

The Department of Biology will show the following films on Wednesdays, 12.30 - 1.30 p.m., in Room 134, Metallurgy Building. All welcome.

August 6 Great Barrier Reef; The Numbat.

Sept. 10 Above the Gorge; The Platypus.

CAMPUS NEWS

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