"The Newcastle Quilt"
by Rae Richards

See note on page 2
University Conservatorium's Symphony Orchestra

The Newcastle Conservatorium Orchestra was founded in 1956 when the Conservatorium was housed in a hut in Civic Park. Over the intervening years, various City Orchestras have been nourished by the injection of musical expertise from the Con. Now called the University Conservatorium's Senior Students' Symphony Orchestra, the large ensemble serves the School of Music as a professional training ground for instrumentalists and orchestral performers.

The orchestra is made up of some 45 players - drawn mainly from the ranks of mature age students and school leavers. The regular core group can be augmented by other students and singers - a practice which makes the orchestra capable of varying its repertoire and presenting major compositions, such as symphonies by Mozart and Haydn.

Since the transfer of the Conservatorium from the War Memorial Cultural Centre in Laman Street to a building on the corner of Auckland and Laman Streets, most of the orchestra's performances have been held in the magnificent $4 million new Concert Hall. The training ensemble presents about nine public recitals every year - often in association with the University Conservatorium Choir. It also accompanies Michael Dudman when he plays the organ on the University's radio station, 2NUR.

When UNINEWS went to press the orchestra was busy rehearsing for a forthcoming concert, the program comprising Bizet's Carmen Suite and Aaron Copland's Our Town.

The Deputy Dean of the Faculty of Music, Mr Robert Constable, has been the Conductor since he came to the Conservatorium from Sydney Conservatorium of Music in 1984. He took over the baton from Mr Errol Collins, the Newcastle Conservatorium Orchestra's first conductor and leader of many junior groups.

Mr Constable said that, although the orchestra had made visits to Sydney Conservatorium it had not toured regularly. The orchestra might tour Tamworth, Armidale and other parts of New England in 1992.

He said that, because the ensemble's main responsibility was to provide practical orchestral training, the repertoire for its performances was not always "popular fodder." Some concerti were included in the program, so that students could be trained as soloists - with the orchestra providing accompaniments.

While public concerts were presented - usually to reasonably sized audiences - some members of which were parents who "to see what junior is doing at the Con" - there was no big emphasis on marketing.

Principally, Mr Constable said, students of high school age and some older ones joined the orchestra. However, some players were as young as 13.

"A staff member might get a talented young violin student of 9 or 10 and, after he or she has been in our junior chamber groups and orchestras, he or she could be ready to go into the senior students' orchestra." Mr Constable said that now Newcastle had a fully professional orchestra - the Hunter Orchestra - there was a flow of some performers away from the University Conservatorium Orchestra. He knew of a few examples of players who had moved on even further to State symphony orchestras.
Major research grants

The University of Newcastle has demonstrated the quality of its research programs by attracting almost $5 million in grants awarded in competition against other Australian universities by the National Health and Medical Research Council and the Australian Research Council.

ARC grants announced in October will bring the University $2.191 million in 1992, a substantial increase on the 1991 figure.

New grants for 1992 from the National Health and Medical Research Council come to $814,000 compared with $481,000 for 1991.

Tied with grants that continue from previous years, this indicates a total funding from this source of nearly $2 million, according to the Dean for Research, Professor Ron MacDonald.

And the University has been awarded $623,000 towards the cost of large and expensive items of equipment, the highest number of successful equipment applications of any university in the country.

A highlight of the grants is a Special Investigator Award - one of only eight in Australia - to Professor Graeme Jameson, from Chemical Engineering, for his work on the recovery of minerals by flotation.

Minerals worth about $1 billion are recovered by flotation in Australia every year - but the existing technology means a further $50 million worth are lost. Professor Jameson's research into the way bubbles can be created on the relevant particles in flotation is directed towards maximising the efficiency of the process.

For his previous work on flotation, including the development of the Jameson Cell, Professor Jameson was awarded the CSIRO Medal in 1990. Together with Professor Rob Evans, of Electrical and Computing Engineering, he has also been elected recently to the Australian Academy of Technological Sciences.

The highest award in dollars made by the ARC - $264,000 for 1992 - is to Professor MacDonald and his colleagues in the Department of Physics. Dr John O'Connor and Dr Bruce King, for their studies of ion-surface interaction, a major technique in surface analysis and modification.

Associate Professor Brian Fraser and Dr Ted Menk, also of the Department of Physics, will receive $170,000 in 1992 for their studies of plasma waves, in particular the transfer of energy entering the geospace environment through to low latitudes.

This involves operating two large arrays of ground magnetometers. The east-west array will make use of instrumentation established in Australia during a major international program, thus permitting detailed studies of the energy transfers while contributing to the global program.

An innovative marriage of technologies - electrophysiological and behavioural - will be used to study visual perception by Professor David Finlay, head of Psychology; Dr Sean McKiernan, of Mathematics; and Dr Mark Manning, a former PhD student at Newcastle now working at the University of Western Australia, in a project granted $90,000.

The importance of coal as an export for Australia has led to considerable study. The fluorescence of coal minerals is one quality which correlates well with all the technologically important qualities of coal, enabling analysts to identify the right coal for particular purposes.

But there are anomalies in its fluorescence. A grant of $16,000 has been made to Professor Claus Dieset, of Geology, for a study of these anomalies and the development of an empirical base for standard fluorometric analysis.

A grant of $108,000 will enable Professor Rob Muloch, Associate Adrian Page and Mr Peter Kleeman, of Civil Engineering, to look at the criteria for the cracking of structural masonry and reinforced concrete slabs. While the mechanics of cracking are understood, the researchers want to look at how the behaviour of foundations relates to the size of crack.

A method of comparing styles of writing, discovered by Professor Emeritus John Burnow, which could be used to identify forgery, plagiarism or the writer's mental state, has attracted a grant of $32,000 for 1992.

Professor Burnows, with Associate Professor Wayne McKenna and Dr Hugh Craig of the English Department, wish to refine the system, which has gained widespread recognition already among scholars who want to distinguish between writing from different eras, genuine texts and revisions or imitations.

Professor Godfrey Tanner, Dr Bernie Curran and Dr Charles Pengelley, of the Classics Department, will receive $20,000 for their study of Anatolian and Mesopotamian influences on Greek material culture.

Among the new NH&MRC grants is funding for a number of cancer-related studies.

Professor John Forbes, of Surgical Oncology, will receive $95,000 for his work on treatment of node-negative breast cancer; Professor Gordon Burns, of the NBN Telethon Cancer Research Unit, will receive funds for two new projects, totalling almost $20,000.

A special initiative area grant has been made to Dr David Henry, for a community study of non-steroidal anti-inflammatory drugs and their connection with acute renal impairment and cardiac failure.

Associate Professor Roger Smith's study of the placental corticotrophin-releasing hormone will bring a significant degree of funding over the next three years, with $95,000 in 1992.
Look back to our origins

The University history project will soon reach its culmination with the publishing of the book, *Looking Back*.

The medium-sized, well-illustrated history of the University begins with Bishop Tyrell, the Anglican Bishop of Newcastle, first envisaging the introduction of university education in the Hunter Valley in 1849 and ends with amalgamation in 1989.

The need to produce a history for posterity has been felt for some time. The University Archives in the Auchenflower Library had helped the project by tapping interviews with the University's identities from the early days.

In 1986, Professor Don Wright, Associate Professor in History, accepted an invitation by the former Vice-Chancellor, Professor Don George, to write the history. Professor Wright was assisted with the research by Tutor in History, Ms Rhonda Geale.

Professor Wright, in writing the story "warts and all", adopted a chronological approach and divided it into seven chapters - in the Beginning; The Quoqno in the Ness; Quest For the Holy Grail - the Autonomy Movement; From Bonfire to Great Hall; Medieval, Outreach and Reform; Years That the Locust Hath Eaten; and "A New Heaven And a New Earth?"

The history, which acknowledges a considerable number of people to whom Professor Wright is indebted for their assistance, is not only concerned with prominent friends of the University and campus personalities but also with a multitude of other important aspects of the development of the institution, such as the establishment campaign, the move from Tighes Hill to Shortland, government, organisation and management, buildings and capital works, curricula, graduate studies, research, sport and recreation, academic, student and staff problems, student services, residential colleges, the Library, TUNRA, Convocation, the Friends, Community Programmes, 2NUR, relations with the Newcastle College of Advanced Education (later the Hunter Institute of Higher Education) and with the community at large, and the Academic Plan and amalgamation.

*Looking Back* throws light on early University days and includes many interesting descriptions of historical events, such as:

- At last, on 3 September 1964, the Herald reported that Arthur E Davis (Building) Pty Ltd, a local firm, began work on the first day of the new University at Shortland and that the buildings would be ready for the first term 1966...
- The State Act which conferred independence on the University of Newcastle bore a remarkable resemblance to one drafted seven years earlier by Basil Helmrose for the Lord Mayor's Committee... (though) Helmrose's draft had provided for a Vice-Chancellor elected from among the professors... The desire for such a system, unique in the Anglo-Australian university world, probably owed more to the view Novocastrians held of Sir Philip Baxter (Vice-Chancellor of the University's parent institution, the University of New South Wales, at the time of independence) than to their unswerving love of democracy...
- On 1 January 1965 there was a bonfire on the Shortland site, about where the Great Hall now stands. It was presided over by Mike Nelson, a well-respected student, and by Geoffrey Turner, forever totally immersed in the affairs of the collegian...
- Mosquitoes caused building work to stop for a while in January 1966... The contractor provided repellent in gallon containers and the City Council lent its spraying equipment. The RAAF had to be called in - Auchmuty's golf days with the officers at Williamtown were paying off - but even aerial spraying provided only temporary relief...
- The book is not a "whitewash", like histories of universities sometimes seem to be. An example of Professor Wright's critical evaluation of events is at the beginning of 'Years That the Locust Hath Eaten':

The years 1978-83 were dominated by a decline in student numbers, financial uncertainty, government interference, and legal problems. They were years of struggle, low morale and a sense of non-achievement. The gloom had no silver lining...

The early stages of the University History Project involved an enormous quantity of research, including conducting interviews with former executive officers to record their reminiscences. One of the "identities who were associated with the place" (understatement on Professor Wright's part) was Sir Philip Baxter.

The primary sources of information for the pre-independence period were the collections of records of the Newcastle University Establishment Group and the Lord Mayor's Committee for the Establishment of an Autonomous University of Newcastle. They were supplemented by papers from the University of New South Wales and the University of New England.

The records of the University of Newcastle itself formed the bulk of the post-independence reference material.

Professor Wright said a very large collection of press cuttings held by the University Archives had been massacked thoroughly, and University News, Opus, Newsletter and such issues of *The Weekly Rat* (an early seventies student paper) as survived ("blessedly few") had been read.

On tape now is a vast amount of "oral history" gathered by recording the interviews. Former members of staff who supplemented the written records are: Emeritus Professor Jim Allen, Don George, Eric Hall, Iris Newton-John, John and Reyna Keats, Laurie Short, Alan Tweddle, Eric Parker and Cyril Rennick, Des John Bach, Geoff Cuthbert, George Haggarty and Ray Walker and Messrs Lew Harris and Greg McNairn.

*Looking Back* is Professor Wright's fifth book. His previously published works include books on early Federalsism in Canada and Australia, Commonwealth-State Relations 1900-1960, the French Revolution and the Sydney Central Methodist Mission. He is currently preparing the story of Methodism in New South Wales and a biography of the former superintendent of the Central Methodist Mission, Sir Alan Walker.

Professor Wright, commenting on the writing of university history, said it involved struggling with all the problems which historians disliked most: lack of perspective, personal involvement and a number of present and past colleagues who knew more than he could ever hope to about particular events.

The Vice-Chancellor, Professor Keith Morgan, has approved expenditure on the publication of the history. The Archives photographic collection provided the basis for the book's illustrations. Use has also been made of a number of Allan Gamble's excellent sketches of the campus.

The design and layout of the cover and the pages was carried out by the Medical Communication Unit. Publication details, including the cost per book and how to obtain copies, will be announced soon.
RATIONALE FOR LAW SCHOOL

The University hopes to make some distinctive contributions to legal education in Australia when it establishes its Law School.

When will the school enrol its first students and what will be the school's approach to the teaching of law?

In an interview with UNINEWS, the recently appointed Foundation Dean of Law, Professor Neil Rees, discusses these questions and explains why he expects the school to produce some of the leaders of the next generation of lawyers in this country.

Professor Rees said he expected a very, very strong demand for places in courses provided by the new Faculty of Law and it was clearly going to be extremely difficult for the Faculty to select the 60 students who would form the initial intake in 1993.

"I am impressed by the practice followed by the Faculty of Medicine of placing a lot of emphasis on interviews with prospective students, and there are strong arguments in favour of the Faculty of Law not taking all of its students straight from secondary schools.

"There will clearly be some very talented people who want to be mature-age students. I would like to consider having some of our students come from this group.

"I would like to have some special places for Aboriginal students, as I had a lot to do with Aboriginals when I worked for the Aboriginal Legal Service in Melbourne".

He imagined that the Faculty of Law's curriculum would allow first year students to do two law subjects and two subjects taught by other faculties.

"At this stage, our students will be doing combined degree courses. We clearly have to enter into negotiations with other faculties about the mechanics of providing the courses.

When asked for his plans for staff for the Faculty of Law, he said "the nucleus will be the staff of the present Department of Law. The Faculty will not have its first graduates until 1997, so we are not looking to have a full staff complement until the mid-1990s. Between now and then, I expect we will put on between 12 and 15 extra staff."

It is the University's plan that the law degree will be recognised by the professional bodies which regulate admission to legal practice. A body called the Legal Qualifications Committee, which comprises judges and senior members of the legal profession, stipulates certain subject areas that must be taught for accreditation purposes.

"As some parts of the law course do not lend themselves to problem-based learning, but other parts do. I see us having a successful marriage between the traditional approaches to legal education and the new."

It was too early to make a final statement about the methods of student selection to be used by the Faculty, he said.

"We realise that there is some urgency, in that the existing Department of Law is being inundated with calls from people wanting to enrol to do law in 1993. Law is now the most difficult course to get into at Australian universities."

With a career background that includes appointments with the Aboriginal Legal Service, Legal Aid centres and the Commonwealth Attorney-General's Task Force on Human Rights, one of his major interests, he said, was human rights.

"I believe that the legal system can be used to protect human rights and stop the abuses of disadvantaged groups in our community. However, I remain a little sceptical about using the legal system for advancement of human rights, because we have a very different legal system from that which exists in the United States, where it has been used to promote the rights of blacks, Mexicans and native Americans."

What would make the Law School distinctive was its final product - the graduates, the Dean said.

"I hope we will produce graduates who are not only learned in the law, but also have a sound appreciation of the legal system and how it actually works."

"It is terribly important to impress upon the students that at the end of the day we are dealing with people and, no matter how hard one tries to devise the law, people have to sit back and judge."

"We are dealing with language and, no matter how clearly one may try to state the law, we are limited by language. Therefore, what one statement in the law might mean to you might mean very different things to me, because we learn language in a very different way."

"It is terribly important for students to realise that the legal system is there for a purpose. It is part of government. It is the branch which is responsible for the resolution of disputes between government and citizens, and between citizen and citizen. People involved in the law can unwittingly lose sight of why it is there. I would hope that our graduates leave with a very strong sense of the law is there."

Professor Rees commented that at present only the very rich and the very poor could afford to gain access to the legal system.

The University's law students hopefully would be the leaders of the next generation of lawyers and would be able to convince those responsible for the design of the legal system that some changes had to be made.
UNIVERSITY-INDUSTRY INTERCHANGE STRENGTHENED

The Federal Minister for Science and Technology, Mr Ross Free, on a recent visit to Newcastle, said the University's close involvement in work for local industry, and in training those who served the region, was a fine example for some of the more traditional universities.

Ventures such as the establishment of the Institute for Bulk Materials Handling Research and the construction of a conveyor belt at the University will produce more concrete results in this regard.

When the question arises, what does this University offer in the campaign to develop Australia's future industrial and economic viability? The Institute for Bulk Materials Handling Research is one clear answer.

Yet it is probably unclear to many what the Institute does and what makes it so important.

First, IBBMR is new - it was set up in the Faculty of Engineering just over a year ago.

Secondly, bulk materials handling research is not something with which most Australians are familiar.

Both these facts belie the importance of the new Institute.

The handling of bulk solids, such as iron ore and coal, is not a new field of activity, but the tasks and the scale of operations vary from one industry to another and from one country to another.

As a consequence, the cost of storing and transporting bulk materials can be quite significant.

The Department of Mechanical Engineering has been involved in a program of bulk materials handling research for many years. Apart from gaining a fundamental understanding, the objective is to apply the research to solving practical problems encountered in industry.

TUNRA Bulk Solids Handling Research Associates - a division of the University's research and consulting company, TUNRA Ltd, is responsible for the research and development activities in bulk solids handling.

The Institute of Bulk Materials Handling Research sees its goals as promoting fundamental and applied research, cooperating with industry and government instrumentality on bulk handling plant design, exchanging ideas with overseas and local institutions, arranging for collaborative research projects, providing a focus for the training of students, conducting conferences, seminars and workshops, attracting grants from industry and putting out research publications.

Membership of the institute is open to University and special members.

Individuals and organisations may be admitted as subscribing members.

The Board of the Institute of Bulk Materials Handling Research comprises the Vice-Chancellor, Professor K.J. Morgan, the Director, Professor A.W. Roberts, the Director of the Institute of Coal Research, Assoc. Professor K.H.R. Moode, the Head of the Department of Mechanical Engineering, Dr R.D. Gann, the Director of TUNRA, Mr D. Clark, the Managing Director of Minenco Pty Ltd, Mr B. Wilson, Managing Director of the consulting company, TUNRA Ltd.

The Institute for Bulk Materials Handling Research comprises the Department of Mechanical Engineering and special members.

The Institute's mission is to apply the research to solving practical problems throughout the region and in other countries.

The Federal Minister for Science and Technology, Mr Ross Free, inspected the wide-ranging activities of the Institute for Bulk Materials Handling Research, Professor Alan Roberts.

The test conveyor belt rig handed over to the University by Minenco Pty Limited recently has attracted considerable attention. The Federal Minister for Science and Technology, Mr Ross Free, inspected the rig during Open Day on September 7. Mr Free is pictured with the Director of the newly established Institute of Bulk Materials Handling Research, Professor Alan Roberts.

J. Hayes, Mr V.H. Levi (appointed by the University Council), Professor C.G. Goodwin (appointed by the Academic Senate), Mr K. Grezil (appointed by TUNRA), Mr D. Clark (appointed by the Electricity Commission of New South Wales), Mr D. Hunter (appointed by Minenco Pty Ltd), Mr G. Turner (appointed by Alcoa Steel), Mr B. Wilson (appointed by Minenco Pty Ltd), Assoc. Professor A.J. Chambers, Mr O.J. Scott, and Mr S. Wiche.

The Board has approved a list of specific cooperative research and development projects to be shared by the Institute for Bulk Materials Handling Research, the Institute of Coal Research and TUNRA, in association with industry.

The Director, Professor Roberts, said the Institute would provide an important focus for the University's bulk solids handling and processing research, which already had a strong international reputation. It would also provide the interface between the fundamental research and the applied mission-oriented research currently being undertaken through TUNRA.

On the day the University witnessed the birth of the Institute for Bulk Materials Handling Research, a $300,000 belt conveyor test rig was handed over to the University.

Constructed by Minenco Pty Ltd, mining project managers and engineers, with headquarters in South Melbourne, in conjunction with TUNRA Bulk Solids Handling Research Associates, the rig operates at the TUNRA Annex in the Faculty of Engineering.

It incorporates the Oramin drive - a system which may lead to overhead conveyor belts of unlimited length. The system allows supplementary power to be injected onto a long-distance conveyor at mid-points using standard conveyor mechanical components.

The Oramin drive has the potential to save millions of dollars in construction costs by reducing the operating tension of a belt.

The Managing Director of Minenco, Mr Brian Wilson, spoke at the handing over ceremony on September 24 of how his company could have built the rig in a number of places, but had approached Professor Roberts about erecting it at the University, because of the University's extensive experience and support of the bulk materials handling industry.

He repeated the warning given by the President of the Australian Mining Industry Council, Mr Campbell Anderson, of the consequences of a shrinking mining industry and the removal of Australia's technological expertise - one of the factors which had kept Australia competitive.

The Vice-Chancellor said the University had been looking forward to the arrival of the Institute, which reflected one of the great strengths of the academic work of the Faculty of Engineering.

The occasion was also an opportunity to celebrate the fact that the University had formed important collaborations with industry and community organisations and this interaction was flourishing, Professor Morgan said.
The University has acquired a $160,000 laser-equipped microscope which has the capacity to revolutionise research into the structure of living tissue.

Purchase of this newly developed instrument, known as a confocal microscope, was made possible by grants awarded to Drs Dirk Van Heiden, John Heath, and other researchers in the Neuroscience Group of the Faculty of Medicine. Half the cost was contributed by an NHMRC Large Equipment grant, and half by the Research Management Committee of the University as an Area of Research Excellence grant to the Neuroscience Group. The Neuroscience Group has a membership of about 40 academic and research staff and students across the campus.

The ability to analyse living tissue is not the only advantage of this powerful instrument. The image is formed by a laser beam which point-scans the specimen. Under computer control, the laser can form an image from a thin "optical section" at any desired level in the specimen. In effect, this means that detailed information can be obtained from relatively thick specimens without the need to cut thin slices mechanically. Three-dimensional reconstruction of the "optical sections" is obtained readily, providing important benefits in terms of time saving and ease of interpretation.

A further major benefit is that the contrast of fluorescence images obtained from the confocal microscope is dramatically enhanced compared to that available from a conventional fluorescence microscope. In essence, this is achieved because the "out-of-focus" flare typical of conventional microscopes is virtually eliminated by the laser scanning system of the confocal instrument.

Confocal microscopy has wide applicability in biomedical research. Currently, Dr Heath and his colleagues Des Herd and Minjie Lin (Discipline of Anatomy) are using the confocal microscope to investigate the structure of myelinated nerve fibres in the peripheral and central nervous systems. Capitalising on the ability of the instrument to analyse relatively thick, living specimens, they are studying the sequence of degeneration in individually identified nerve fibres following peripheral nerve injury.

In the course of this work, Dr Heath's group has established a novel method of labelling myelinated nerve fibres throughout the nervous system (see Figure). Combined with the analytical power of the confocal microscope, this approach permits correlated structural and functional analyses to be performed on single living nerve fibres in a manner which has not been possible previously. This approach could be used, for example, in studies of normal development of the nervous system, or in the so-called demyelinating diseases such as multiple sclerosis.

Dr Van Helden and his colleagues (Discipline of Human Physiology) are investigating the way in which nerves control blood pressure. With the aid of the confocal microscope they were able to produce the first clear visualisation in living tissue of the very small nerve fibres which are associated with blood vessels (see Figure). These nerves are involved in regulation of blood vessel diameter, and thus of blood pressure.

Recently Dr Van Helden was joined by Dr James Brock, a DPhil in pharmacology from Oxford University. Dr Brock also has particular expertise in the physiology of blood vessels. He has a two-year appointment as a Research Fellow, funded by the Faculty of Medicine.

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**Myelinated axons in a thin “optical section” of an dissected rat median nerve. Nodes of Ranvier (large arrow) and Schmidt-Lantermann incisures (small arrow) are characteristic features of the myelin sheath and are clearly displayed. Scale bar 50 μm. Micrograph by Dr Minjie Lin.**

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**A small arteriole viewed in vivo by confocal microscopy. The tissue has been stained intracellularly using a calcium-sensitive dye. The arrows indicate nerve fibres which innervate this blood vessel. Scale bar 50 μm. Micrograph by Dr Dirk Van Helden.**
Uncertainty plagues scientists about the possible effects of the warming of earth's climate.

Glaciologists know that Antarctica's ice sheet, which covers 98 per cent of the continent and contains more than two-thirds of the world's fresh water, moves towards the sea and calves directly from the large ice sheet edge or from outlet glaciers.

But they are divided about whether the ice sheet is shrinking or growing.

The University's Professor of Geography, Professor Eric Colhoun, sparked some excitement at a meeting in Ranzan in Japan last September when he advocated the view that the Antarctic ice sheet margin has retreated little in the last 10,000 years and is in steady state or advancing locally, rather than shrinking rapidly as would be required by the Greenhouse effect.

Speaking to scientists attending the Sixth International Symposium on Antarctic Earth Sciences, Professor Colhoun said field studies had contributed to the view that the ice sheet was a much more stable mass than adherents to the Greenhouse effect would have us suppose and, as Antarctica is the main source of water for future sea level rise, climatic modellers and politicians may be disappointed. He said it was not yet possible to tell the effects of the warming of the climate on the ice sheet.

About 300 scientists attended the symposium and debated several aspects of Antarctic geology, including the history of the ice sheet, the changes in its extent, its future and changes in sea levels.

A glacial geomorphologist, Professor Colhoun gave a paper at the International Symposium on the glaciation and deglaciation of the Bunger Hills, which he and Asst. Professor Don Adamson, of Macquarie University, studied when they were members of the Australian National Antarctic Research Expedition.

The Bunger Hills are the largest ice free area in East Antarctica and are located on Antarctica's inner continental shelf, which is less than 300 metres deep. The highest are 150-160 metres high.

Antarctica's outer continental shelf lies in water of 250-3000 metres depth and extends 50-100 kilometres north of Bunger Hills.

One of the main interests in Antarctica, Professor Colhoun said, was to learn how thick and extensive the margin of the ice sheet was during the last glaciation (25,000-12,000 years ago).

Scientists working offshore in the Ross Sea of West Antarctica and at Prydz Bay in East Antarctica have suggested that, at the maximum of the last glaciation 20,000 years ago, the ice sheet margin was 1000-2000 metres thick and extended to the edge of the outer continental shelf.

Their conclusions depend largely on a combination of theoretical models of ice sheet profile form and on offshore drilling records.
EXCHANGES WITH
Russian Academics

The Faculty of Medicine and the Centre for Industrial Control Science have forged strong research links with the USSR Academy of Medical Sciences and the USSR Academy of Sciences respectively.

Professor Galina Alexandrova, Head of the Department of Virology at the USSR Academy of Medical Sciences, and Professor John Hamilton, Dean of the Faculty of Medicine, reached an agreement on scientific cooperation between their institutions.

Professor Alexandrova's visit to the University of Newcastle was the outcome of the visit of Assoc. Professor Greg Tannock, of the Division of Pathology, to the academy, which is in St Petersburg.

Both Professor Alexandrova and Professor Tannock pursue research into the development of live vaccines, which, delivered as nasal sprays, provide protection against influenza. They have continued looking for opportunities to exchange information with researchers from countries outside their own.

Previously, Professor Alexandrova's research group formed cooperation agreements with groups at the University of Michigan, in Ann Arbor, and the Center for Disease Control in Atlanta, in the United States.

She said the Department of Virology had 34 staff, including 20 scientists, whose work was the development of experimental and clinical live influenza vaccines.

The accord between the USSR Academy of Medical Sciences and the Faculty of Medicine envisages continuing exchanges beginning next year, with a top Russian postgraduate student coming each year up to 1994 and Professor Tannock, one of his researchers, reciprocating by paying visits to Russia.

Professor Tannock already has very good connections with the University of Michigan, which supplied his group with several vaccine viruses.

"The collaboration with the St Petersburg group represents a unique opportunity to forge a three-sided relationship of complementary research interests," he said.

Professor Alexandrova's visit to the University was sponsored by the Australia USSR Committee for Cooperation on Medical Science and Public Health and the University's Senate Research Committee.

Very soon after Professor Alexandrova's visit, Professor Yakov Z. Tsypkin, an Academician from the USSR Academy of Sciences, in Moscow, arrived on the campus and formed a partnership with Professor Graham Goodwin and Professor David Hill in the Centre for Industrial Control Science (CICS).

Previously, a direct relationship had been formed with power engineering institutes in the USSR when Professor Hill, who took up the new Chair of Power Engineering early this year, made a tour.

Professor Hill lectured to research groups from the institutes in Moscow and St Petersburg and was involved in talks on joint research projects. Professor Tsypkin was described by Professor Goodwin as "the father of control system theory in Russia."

"No," Professor Tsypkin joked, "- the grandfather."

He heads the Laboratory of Adaptive Discrete Control Systems in the Institute of Control Sciences - a section of the Academy of Sciences. His unit is made up of 10 scientists and five engineers. Altogether, the Institute embodies 60 labs with a staff of 2000 and its main areas of research expertise are automatic control theory, computers, control devices and applications for control systems.

Apart from a meeting with Professor Goodwin in Munich at an international conference, Professor Tsypkin knows Graham as a result of his authorship of scholarly publications.

"Professor Goodwin's book on control systems was translated into Russian and is very popular with scientists working in the area," he said.

Professor Tsypkin, according to Professors Hill and Goodwin, became a professor at 28 - unusually young for an academic in Russia. He is called an Academician - a high distinction used to honour top researchers.

He has written 12 books on control sciences and most of them have been translated into other languages.

In Newcastle for two months, with his wife Olga, Professor Tsypkin came from Russia with assistance from his government and CICS.
New Resource Centre for Nurses at Newcastle

Professor Rosemarie Rizzo Parse, of City University, New York, officially opened the Centre for Nursing Research Practice Development and Research at Newcastle University on September 12.

Professor Parse said the opening of the centre would have an impact on the world of nursing beyond Australia.

The centre is intended to provide resources for registered nurses, practising or not, to keep up with the latest developments in their profession and to pursue research into fields which interest them.

Professor Parse, who is Director of the Centre for Nursing Research at Hunter College in City University and editor of Nursing Science Quarterly, said the creation of such a centre represented an explicit expression of the value placed on nursing studies by the University administration, the Faculty of Nursing and by the community.

The Director of the Centre, Associate Professor Lyn Porritt, said she was delighted that a nurse as eminent as Professor Parse had been able to visit Newcastle and inaugurate the Centre with a seminar on "Nursing Knowledge as a Guide to Practice and Research".

The seminar was attended by about 100 registered nurses and students.

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Book to be published in Europe

A book on interaction strategies for health professionals written by the Head of the Department of Professional Nursing Studies, Associate Professor Lyn Porritt, is to hit European bookstores next year.

Finnish publishing company, Otava, has bought the translation rights to Interaction Strategies - An Introduction for Health Professionals and it's possible the book may penetrate the eastern European market as well as Western Europe.

Professor Porritt, who also is Director of the University's new Centre for Nursing Research Practice Development, said her book was already being used widely as a text in British nursing courses and as a lecture degree in physiotherapy and occupational therapy programs.

The publication is the second edition of a book originally written in 1984. The first edition was entitled Communication - Choices for Nurses and has been a reference for many years in Australian undergraduate nursing courses and also for registered nurses.

"I changed the title because of the multi-professional nature of topics that the second edition addresses," Professor Porritt said.

"The 10 chapters are broken into two sections, the first section discussing theoretical foundations such as communication and socialisation and the second section discussing interaction strategies involving the challenges of listening, assertiveness, crisis, problem-solving, and management."

Churchill Livingstone is the publisher of the second edition, which has been well received in Australia since its launch last year.
New landmark on campus

The University's newest building - made of steel and containing not one brick - will be the home of the new Bachelor of Building degree course.

The “Building building”, with its eight-metre high canopy, has already become an architectural landmark on the campus.

The estimated total cost is $774,000 and this has been met by the Building Services Corporation of New South Wales, which sponsored the new building course.

“A very exciting design,” in the words of Professor Denny McGeorge, Professor of Building. It stands in a tree-studded arcadian setting alongside the School of Architecture building, to which it is connected by a covered inclined bridge.

Professor McGeorge predicts that, because of the unusual design, the building will cause architecture students from throughout New South Wales to make pilgrimages to the University to look at it.

In his report on the design of the building, the architect, Mr Michael Wilford, says that the use of steel in the frame and for external surfaces is a confident expression of the skills of Newcastle’s steel industry and an exposition of structure and services systems to assist students in their understanding of modern building technology.

Mr Wilford, who is a partner in the architectural firm James Stirling Michael Wilford and Associates, of London, Stuttgart and Berlin, and is currently designing the Singapore Polytechnic, supervised in 1989 an office in the School of Architecture which was set up for the purpose of preparing the design for the new building.

Apart from Mr Wilford, the office comprised students from the third year of the Bachelor of Science (Architecture) course, staff from the (then) University Planner’s office and the Faculty of Architecture and specialists consultants.

The project consists of two pavilions situated on either side of a covered concourse, which will ultimately connect with future new studios, faculty offices and classrooms.

The architect says the concourse provides a visible and dramatic new entrance to the School of Architecture and faculty offices and classrooms.

Professor McGeorge says that members of the new Bachelor of Building course will have operated in temporary accommodation in the School of Architecture for a long time and it will be a tremendous boost to have dedicated premises.

The Bachelor of Building course was offered this year for the first time. An external mode is planned for next year.
Anna Rutherford was born, and grew up, in Mayfield. She holds an Arts Degree and was the University’s first First Class Honours graduate in English literature (1966). For many years she has been Professor of Post-Colonial Literature at the University of Aarhus in Denmark.

Her intention in bringing together literature and photographs on Newcastle is, she says, “to help dispel the image of a person from Newcastle as an aggressive, uncultured person addicted to pubs and poker machines.”

Dangaroo Press, of New Lambton, which is run by Professor Rutherford and Mr Allan Rich, publishes Kunapipi tri-annually, together with other volumes specialising in literature, art and criticism. The company’s output so far totals more than 50 books.

Eight of the illustrations in the magazine are by Newcastle artist, Rae Richards, who made the applique banners that can be seen above the entrance doors in the Great Hall. The illustrations are of landmarks in Newcastle, such as Nobbys, Newcastle Cathedral and Bar Beach, and have been copied from The Newcastle Quilt, a traditional quilt made by Rae Richards.

Concurrent with the release of Kunapipi, Dangaroo Press put out eight beautifully produced, glossy postcards which reproduce the scenes from the quilt.

Many of the contributions to the magazine are the work of writers who live in Newcastle, including Paul Kavanagh, Charles Jordan and Christopher Pollmier, who teach at the University. Zeny Giles and Rosemary Melville. Other contributors, such as Julian Croft, Marion Halligan, P.A. Jeffrey and Russell McDougall, were born in the steel city.

Kunapipi began life as an academic paper dealing with the literature, art and culture of the post-colonial world - “all those countries that were once painted red on the map of the world, an indicator that they were owned by Britain,” Professor Rutherford says.

From time to time special issues featuring certain countries, themes or writers are published by Dangaroo Press. Why feature the City of Newcastle, Australia?

“First of all, one could say, for selfish reasons,” Anna Rutherford says.

Though she has not lived in Newcastle for more than 25 years, she still regards it as home and returns whenever possible.

But, she explains, there are other reasons for releasing the Newcastle edition of Kunapipi.

“Newcastle is a town which fits perfectly into the colonial, post-colonial syndrome. What began life as a penal settlement in 1797 evolved into a coal town with free immigrants coming essentially from the coal-mining towns of England and Wales.

“They were soon to learn that whatever help they needed they must provide themselves - what
interested management was profit, not people.

"These early settlers started a pattern of self-help that has remained one of the characteristics of Newcastle, exemplified in such institutions as trade unions, Friendly Societies, Sick and Accident Benefits and cooperative stores.

"Growing up in Newcastle we were taught to be proud of the fact that we lived in 'the largest industrial city in the Southern Hemisphere'.

"We were unaware that the rest of Australia regarded it as a dirty, ugly industrial city inhabited by a lot of 'bolshies' who'd go on strike at the drop of a hat."

Professor Rutherford comments that in one respect the knockers were right - "the pollution was horrendous, but it was a pollution which at that time we accepted as necessary - coal trucks trundling by and black smoke belching forth over the city meant employment."

She says the history of Newcastle is a history of exploitation. Newcastle's workers have contributed greatly to the economic wealth of Australia, but little of this wealth has been returned to the city.

The quality of the creative writing in the Newcastle edition of Kunapipi, she believes, speaks for itself. The scenes from The Newcastle Quilt exhibit the skills of the artist and celebrate the charm of the city, as well as the beauty of the beaches which even two centuries of industry have not managed to destroy.

Professor Rutherford observes that the restoration of much of the natural beauty and the creation of a cultural life in the city have been achieved essentially through the same process that has been with Newcastle from the beginning - that of self-help.

She remembers playing in squash matches while she was a student. The University's Women's Team, including Anna Rutherford, won the A Grade competition on many occasions.

The Newcastle expatriate organised the first Commonwealth Literature Conference in 1971 and, in 1986, was the first woman to be appointed International Chairperson of the Association for Commonwealth Literature and Language Studies.

The Kunapipi special edition sells for $12.95 and the postcards for $3. They can be bought at the Co-op Bookshop in the Union.
A small function held in the Vice-Chancellor's office earlier in the year marked a very important occasion and a significant boost to Aboriginal students enrolled in the University's Bachelor of Medicine course.

The occasion was the handing over of a $100,000 donation to the Faculty of Medicine to be used specifically to assist Aboriginal medical students who, for a variety of reasons, may not be able to complete their course. The money will be invested with the interest being used to create the Jack O'Sullivan Fund which can be drawn upon if a student or students are in need.

The donation was made by Mrs Ruby O'Sullivan, the widow of a former Melbourne Cup-winning jockey, Jack O'Sullivan, who died in 1985. While presenting the cheque, Mrs O'Sullivan said she was very concerned with social conditions experienced by Aboriginal people throughout Australia. She said that when her husband died after a five-year battle with cancer, she made up her mind to "put her money to work where it would do the most good" and chose the education of Aboriginal doctors as the cause closest to her heart.

After a meeting with the Dean of the Faculty of Medicine, Professor John Hamilton, Mrs O'Sullivan said she was impressed with the commitment to the education of Aboriginal doctors by the University of Newcastle and was particularly pleased to find that 13 students of Aboriginal descent were enrolled in the course.

"I want to be of help to the Aboriginal students and I want my money to work so that they can help themselves," said Mrs O'Sullivan.

"I see myself as a humanitarian and if I can provide a means of practical assistance, particularly in this very important area, then it makes me very happy.

"I am hoping to popularise the idea of the fund through the Australian Jockey Club as a fitting memorial to Jack, who was so well known in racing circles. This could significantly add to the original investment," she said.

Jack O'Sullivan rode to success as a 20-year-old apprentice on Hall Mark in the 1933 Melbourne Cup. He was well-known throughout racing circles as 'the gentleman of the turf' and went on to become a successful trainer.

"He was an honest rider, was well-liked and respected. It has been said that he had magic hands on the reins," Mrs O'Sullivan added.

The medical course makes available up to six places for students of Aboriginal or Torres Strait Islander descent. Applications are received from all over Australia and current students in the course come from Broome, Darwin, Alice Springs, Tasmania, and various parts of Queensland as well as New South Wales.

Prospective students need to have either attained successful tertiary experience or achieved good marks in the Higher School Certificate and be of Aboriginal or Torres Strait Islander descent.

Mrs O'Sullivan met some of the Aboriginal students in the Medical course after the presentation.
Sundsvall Experience

In the Swedish city of Sundsvall earlier this year, an international conference reached an important conclusion.

Three hundred and eighteen people from 81 countries resolved to speak to the world as one and unanimously endorse the six-page Conference Statement.

It was the Third International Conference on Health Promotion and, under the title of Supportive Environments for Health, was the first global attempt to set today’s public health and environmental issues on the same agenda. The statement acknowledged the threat to human health through environmental degradation, widespread poverty and deprivation and called for action from policy makers and decision takers throughout the world.

Through their work with Newcastle University’s Centre for Human Ecology and Health Advancement, the Dean of Health Sciences, Assoc. Professor Jenny Graham, and the Centre’s Director, Dr. Morteza Honari, were invited to contribute to the conference. Professor Graham accepted and agreed to act as a rapporteur. While acknowledging that the Conference Statement could be quickly dismissed by cynics, she believes the meeting’s conclusions will have global significance.

Attention during the conference was sometimes focussed on the appalling physical, social and economic circumstances of millions throughout the world. Yet, says Professor Graham, there was a surprisingly positive sentiment that, through concerted global action, change was possible. The fact that more than 300 people from 81 different backgrounds, cultures, religions and economies could react in unison through the Conference Statement was a start.

Professor Graham believes that a major outcome of the conference will be the use of the Statement, in conjunction with the Conference Report, to influence proceedings at two important meetings next year - the World Health Assembly, in Geneva, and the United Nations Conference on Environment and Development, in Brazil.

One of the biggest problems in achieving change through the Conference Statement, Professor Graham admits, is that it deals with “so many intangibles.” For people who like to measure, quantify and pigeon-hole, the concept of “supportive environments” for health can be difficult to grasp. Largely it follows the tenet that you are what you eat and breathe and experience emotionally, culturally and spiritually. Good health requires a stimulating and satisfying, as well as safe and clean, environment. Ultimately, it is a case of “what’s good for the globe is good for human health” which naturally puts health professionals and environmentalists in the same camp.

This approach embraces an holistic attitude to health, requiring input from a diverse range of disciplines and assessing human health from a variety of perspectives including mental, physical, environmental, political and social. It focuses on the principles of equity and the interdependence of all living beings. It also emphasises the need for behaviour and attitudinal change to achieve quality of life.

“This view of health”, Professor Graham says, “takes us well beyond a Western medical science perspective.”

“It acknowledges the unique spiritual and cultural relationship of indigenous people with their physical environment and the input of this to health.”

“It recognises the role of women’s skills and knowledge in creating infrastructure supportive of health, and generally the need for broad community involvement and control.”

The level of acceptance this approach is now receiving is reflected in the endorsements for Newcastle University’s Centre for Human Ecology and Health Advancement. Increasingly, demands are being made on its staff to contribute, nationally and internationally, to health and environmental policy.

As well as Sundsvall, Professor Graham and Dr Honari were invited to present papers at two other significant conferences this year: the International Human Ecology Conference, Human Responsibility and Global Change, in Gothenberg, Sweden, and a meeting sponsored by Simon Fraser University and the Commonwealth Human Ecology Council (CHEC) in Vancouver. The role of the Vancouver meeting was to prepare a briefing on human ecology and health for this year’s Commonwealth Heads of Government Meeting.

The Centre’s influence has been further advanced this year with its establishment as the Australian Chapter of CHEC.

On the domestic scene, Professor Graham and Dr Honari are providing policy advice, following an invitation from the Public Health Association (PHA) of Australia, on national strategies to achieve Ecologically Sustainable Development.

Professor Graham has recently been appointed to the PHA’s standing committee on public affairs and has used the Sundsvall experience to promote supportive environments in Newcastle.
The Convocation of the University of Newcastle has its own shop on campus for the first time in its 25-year history.

The shop, which doubles as an office for Convocation Officer, Margaret Wells, can be found in the former Westpac Bank premises along the course of the Hunter Building.

It began operating on August 12 and has already proved a tremendous success, not only in generating additional sales of mementoes and other memorabilia, but also in helping to raise the profile of our organisation. Its establishment has been one of our most important achievements since amalgamation and we are confident it will become an even more effective promotional vehicle for Convocation on campus in the years to come.

Another recent move by your Management Committee worth special mention is its decision to ask Newcastle’s Lord Mayor, Ald John McNaughton, the Mayor of Lake Macquarie, Ald Doug Carley, to host mayoral receptions for our university’s overseas students annually, from next year, as part of Orientation Week.

Ald Carley, incidentally, is a member of Convocation’s Management Committee. Congratulations Doug on your election as Mayor.

Overseas students bring approximately $2.5 million to the university each year and the receptions would be an appropriate and worthwhile gesture on our behalf.

At the same time, Convocation will also organise a special reception, probably in the form of a barbecue, for local students joining the university.

Another initiative of Convocation will be the awarding from next year of special $100 book prizes to outstanding students proceeding to their second year of study. The awards, financed by raffles conducted at our annual Graduation Balls, will not be made solely on the basis of academic performance. Any student whose contributions have enriched his or her Faculty will be eligible.

The winning students will be nominated each year by the Deans of Faculties. Next year there will be four prizes, one each in the faculties of Architecture, Art, Design and Communication, Arts and Economics and Commerce. In subsequent years, the prizes will be offered to faculties in continuing alphabetical order and the number of awards will be determined by the success of the Ball raffles.

More than $12,000 has now been donated to the Convocation/ Rotary Appeal for $250,000 to build a Common Room and other accommodation for students at International House on campus. We have also received pledges for at least another $5,000 and we are confident the total will pass $200,000 by the time UNINEWS goes to press. But we are still well short of our target and I appeal to all members of Convocation to support this project if you haven’t already done so. Remember, members who donate $100 or more to this appeal will automatically have their names inscribed on a Convocation Roll of Honour at International House.

Please send your donations to The Convocation Shop, Hunter Building, University of Newcastle, 2308.

I am happy to report that our revived Newcastle Lecture, delivered in the Griffith Duncan Theatre by former Democrats Leader Janine Haines on September 11, was highly successful. Ms Haines presented an outstanding address entitled Australia: Myth-driven into the Future, copies of which will be published by Convocation in the near future.

About 300 people from a wide cross section of the community attended the lecture, making it one of our most successful ever. I’m sure all those who listened to Ms Haines will agree that she is sadly missed on the Australian political scene.

A changed format also gave Convocation one of its most successful inaugural lectures on August 1. This lecture was delivered by Professor Lois Boryson, Dean of the Faculty of Social Science, in the Purdie Room of the Great Hall.

The outstanding quality of the speaker and the luncheon venue attracted an audience of more than 200 – easily our best attendance at an inaugural lecture in recent times. We will continue to use that time of day and format for future inaugural lectures.

We are also looking at a daytime format for our annual meetings of Convocation in an effort to increase attendances.

Congratulations to the two new members of the Convocation Management Committee, Isabel Mitchell and Chris Tola, elected at the annual meeting on July 10.

I would also like to take this opportunity, as this is the last UNINEWS for the year, to thank Margaret Wells and all members of the Management Committee for their tireless efforts in 1991. I look forward to working with them all next year.

Vic Levi
WARDEN OF CONVOCATION.

The Newcastle broadcaster and critic Mrs Marjorie Biggins has been chosen as this year's recipient of the Newton-John Award.

The award, given annually in honour of the former Deputy vice-chancellor, Professor Brin Newton-John, recognises outstanding innovation or creativiy, bearing in mind the originality, lasting value, aesthetic value or benefit to the community of the recipient's work.

Mrs Marjorie Biggins

Marjorie Biggins has made an outstanding contribution to the artistic and cultural life of the Hunter region.

As an Arts student at the then University College, Marjorie produced and directed the first Uni Reviews.

With her husband, Dennis, she founded the Student Players - and Brin Newton-John himself played the lead in their first production.

In 1962, Marjorie joined the ABC in Newcastle. She has worked as a newsreader, freelance producer and interviewer, producer and presenter of a weekly arts program, and a critic on NBN 3 television, as well as ABC radio.

"This award is, in a sense, only a token recognition of Marjorie Biggins’ efforts," the Warden of Convocation, Mr Vic Levi, said.

"The real testimony to her achievements lies in the great number of friends and admirers she has gathered over the years. Convocation is proud to join those friends in recognising Marjorie’s years of effort and achievement."
Life is getting busier all the time for graduates Patricia Forsythe and Doug Carley.

Patricia is now the Honourable Patricia Forsythe, a member of the New South Wales Legislative Council, and Doug has taken up duties as Mayor of the City of Lake Macquarie.

Mrs Forsythe was a teacher for nine years at several high schools, including Jesmond and Newcastle Grammar, and then, in 1986, the Forsythe family (mother, Patricia, husband, David - B.Com, 1973 - and children, Kate and Jonathan) moved to Sydney.

Patricia switched from teaching to becoming, first, Public Affairs Manager for the Australian Softdrink Association and, then, Executive Officer for the NSW Minister for Local Government and Planning, (then) Mr David Hay. A longstanding member of the Liberal Party (she was President of the Newcastle Young Liberals when she was studying at university), she was endorsed by the party and elected to the NSW Upper House in the May, 1991 elections.

Mrs Forsythe said in her maiden speech to Parliament that governments could no longer ignore her home town, Newcastle.

"When groups in the city come together for common goals the city is a formidable force, the spirit perhaps that has been most evident in the time since the earthquake," she said.

She has been allocated the regional electorates of Charlestown, Lake Macquarie and Swansea as her areas of special responsibility on behalf of the New South Wales Coalition Government.

Arriving at university in 1970, Patricia Wingrove became a successful undergraduate (she shared the Sarah Wheeler History Prize in 1972) and an active participant in student affairs.

"It was a wonderful time to be at Newcastle University," she says of the early seventies. "We were a small campus compared with the old universities in Australia. I remember often in the Courtyard getting up and speaking to try to defeat some pretty radical propositions. A great advantage we had was the close interaction between the stuff and the students."

UNENews clearly remembers Patricia and her twin sister, Anne, when, as the Wingrove girls - daughters of Mr Jack and Mrs Peg Wingrove, of Mayfield East - they were students of the University.

Anne came to university from Newcastle Girls' High School and Patricia was at the former Hunter Girls' High School. Always competitive with each other, they obtained identical passes in the HSC.

Their marriages were held only nine weeks apart in 1973.

Anne is a Lecturer in Law in the University's Department of Management and Sub-dean of the Faculty of Economics and Commerce. She is married to Mr Murray Finlay, Newcastle Manager of the ABC, and they have a daughter, Susan.

A former journalist at NBN Television in Newcastle, Anne's career has seen some changes. After taking out her first degree (BA, 1974), she enrolled in the BEd degree course and found that she liked legal studies. This led to her becoming an external student of Macquarie University, from which she obtained a Law Degree and a number of prizes.

Murray and Anne Finlay, after spending two-and-a-half years in Papua New Guinea establishing television broadcasting, returned to Australia and lived at Toowoomba, where she lectured in law at the University College of Southern Queensland. Anne is now pursuing a Master's degree in Law through the University of New South Wales.

Alder Carley was elected Labor Mayor of Lake Macquarie in September, 1991. He has taken four years' leave of absence from teaching so that he can apportion time to being a full-time mayor.

He has a Bachelor of Arts degree from the University (1977). For the past two years he has been a member of the Standing Committee of Convocation.

Doug Carley believes in the educational approach to making Australia prosperous again. He was born in England, raised in Canada, educated at Simon Fraser University in Vancouver and taught at schools in Canada, England and Australia.

He and his wife, Judith, met at a school in London. Mrs Carley (BA, 1986), presently Principal of Tighes Hill Public School, is working on a Master of Educational Studies program.

As part of his coursework for his postgraduate degree, Doug Carley completed a thesis on the effect the school curriculum can have on a pupil's personal development.

Since arriving in Newcastle he has taught English at Warner's Bay, Glendale, Corhunter, Belmont and Broadmeadow High Schools. He was Head Teacher of English at Broadmeadow High School when he was elected Mayor of Lake Macquarie.

He says some of the most satisfying periods of his life were those in which he was studying, and trying to implement, ideas about education.

Examples are the Lake Macquarie Youth Council - an attempt to include young people from the community in decision-making - and Precinct Committees which it is proposed will be set up in parts of the municipality to advise the Council.

He believes that having a popular vote for the Mayor (a method shared by Lake Macquarie, Newcastle and Cessnock City Councils) is an ideal arrangement.

"People have been treated poorly outside the Lower Hunter," he says. "I am very opposed to community leaders being elected by oligarchies [of aldermen]."

"A Mayor is not a prime minister and a Council is not a parliament. If the people are to have proper representation, they must elect their representatives themselves."

Turning to his aims for the city of which he is the new civic head, he says Lake Macquarie is an ideal geographic position - better located than other areas of the Hunter Valley - to attract technological development - close to roads, railways and water routes.

"We also have the advantage of strong links with the region's University and TAFE Colleges and, given a well-educated and skilled workforce, we should be perfectly attuned to major business enterprises."
Where are they now?

Dr Nick Aalders
graduated in 1989 with a BMed. Since graduation he has worked as an RMO at the Royal Newcastle Hospital in 1989 and Launceston General Hospital in 1990. He is presently working as a self-employed GP at a practice in Lightning Ridge where he is the only doctor for some 6,000 people. Nick describes this as "... quite demanding, but the experience is certainly varied, interesting and rewarding."

Ms Julianne Cripps-Clark
graduated in 1986 with a BE (Elect.) with Honours Class II. She is currently working at BHP Information Technology as a Senior Programmer Analyst specialising in design and implementation of Computer Integrated Manufacture-based solutions and strategies for BHP and other non-BHP clients using "Open" Technology.

Dr Nigel Krauth
graduated in 1970 with BA (Hons). He also holds the degrees of MA (from ANU) and PhD (from Qld.). He is presently a Lecturer in Literary Studies at Griffith University.

Nigel has written various novels including Matilda, My Darling in 1983 (co-winner of the Australian/Vogel Literary Award) and The Bathing-Machine Called "The Twentieth Century" in 1988, both published in America. With his wife, Carol, he co-authored adolescent novels including Sin Can Can (1986) which was published in the United Kingdom and Rack Off, Rachmaninoff (1989).

Cynthia Hunter
graduated with her Dip.Ed. in 1967 and has served as President of the Newcastle Chapter of the University Women Graduates’ Association. Having originally graduated in Science from the University of Sydney, Cynthia’s interests turned to history and she holds a Diploma in Educational Studies, Local and Applied History from the Armidale college of Advanced Education.

She has recently published a book, The earth was raised up in waves like the sea..., a review of earthquakes and tremors which have been recorded in the Hunter Valley since white settlement. It contains a great deal of information not only about geology and seismology but also about regional and social history. Copies are available through the Co-Op Bookshop.

Mark Lennard
graduated from the University of Newcastle with a Bachelor of Surveying. Has held a variety of positions since graduating, including surveyor’s assistant, Surveyor, Exhibitions Officer, Manager of Aboriginal Art Gallery and Workshops in Alice Springs, organising national and international exhibitions. Travelled overseas and worked on cultural exhibitions. Has co-written and published a book on aboriginal paintings of central Australia. Presently working at Gallery Gondwana in Alice Springs.

Rupert Y. Lo
graduated in 1986 with BSc and in 1988 B.Arch. The University of Sydney recently conferred upon him a Master degree in Town and Country Planning. In 1990 he was awarded the "Most improved pilot" at the Royal Aero Club of NSW. The Civil Aviation Authority has issued him with flight radio operator and private pilot licences. Presently he is working as an Architect/Town Planner/Urban Designer at CL Tsang & Partners in Hong Kong.
Ten years ago, when single women of marriageable age outnumbered eligible men 150 to 100 in Australia, Professor Brian English predicted all would even out by about 1990.

The Professor of Social Work's prognosis may have sounded like that of a Mills and Boon heroine at the time, but this year the Australian Bureau of Statistics has proved his prediction spot on - a gratifying vindication of academic crystal ball-gazing.

And yet ... it seems there are almost as many women today as there were a decade ago complaining that "all the good men are either married or gay".

They're wrong. But the fact is, many women cannot find a "suitable" male partner, and Professor English's research can show why.

To begin, it is necessary to appreciate that statistical analysis is generalisation, and individual cases often differ from the general example.

And, while finding a partner for life is perhaps the most sensitive and personal choice a person makes, the statistical picture looks just like a commodity market. The rules of supply and demand apply to spouses as they do to iron ore or pork bellies.

From the statistician's unromantic point of view, there are in fact two marriage markets: the 'first-marriage' market generally covers women up to the age of 35; the "second-marriage" market covers women aged 35 to 45. Men participate in both up to 59. People who marry under 35 are generally marrying for the first time, while marriages involving women 35 to 45 are generally a second marriage for at least one partner. Few women over 45 marry at all.

Then there is the marriage "gradient". Women in Australia tend to marry "up": they marry men older, better educated - even taller - than themselves; conversely, men tend to marry "down".

The Great Man Shortage of the 1980s was a product of these two elements.

Normally, more male than female babies are born, but males die off faster - largely, in this country, through motor vehicle and other accidents and suicide. By the age of 30, the numbers of males and females are roughly equal.

However, the Second World War produced a dislocation. Fewer babies were born from 1940 to 1945, and a baby boom followed the return of men from the war. But the large number of women born in 1946 and just after outnumbered the males born in the early 40s, so they had few men to whom they could marry "up".

By 1981, these women were moving beyond the first marriage market, and met an unprecedented shortage of eligible men. In fact, with 150 women for every 100 men in the marriageable age groups, it was the worst shortage of men in our history.

The numbers in the marriage markets have evened up since, largely of older men returning to the "market" and because of Australia's immigration programs which traditionally favour males.

Yet a large number of women have difficulty in finding a male partner - assuming that they want one.

The difficulty stems from the fact that there are more women in 1991 than ever who are well educated, financially independent, and successful in their chosen career. At the age of 35, they have not found a man to whom they can marry "up".

Not that there are no men around; the problem is that, generally, the single men slightly older than 35 have not been able to find anyone to whom they can marry "down": they tend to be poorly educated, short, fat, probably unemployed.

Those women aren't going to marry those men.

They might marry men who have one marriage behind them. (An odd pattern appears at this point: men may tend to marry younger women at their first marriage, but their second marriage will more likely be with a partner the same age or slightly older.)

This is ominous for one group, women divorced or widowed in their 50s. Having married young, when they were, relatively, not well educated and not particularly successful in their career, they now find themselves "competing" for second-marriage men with the most successful, educated - and tallest - women in the community.

One result is that 20 per cent of women over 45 in Australia live alone or with another woman. Looking at the comparable figures for men, it is quite clear that the line about "all the good men being gay" is a fallacy; far fewer men live alone or with another man.

In fact, this is where Professor English's research began, trying to predict the number of women with children who would draw the supporting parent's benefit.

Mathematically, there is an easy solution to the imbalances in the marriage markets. The successful single, high career woman should look at marrying "down".

Socially, though, a stigma popularly attaches to the idea of marriage with a younger male, and women who have worked hard for material success in a male-dominated society may not like the idea of starting with a mere male. But mathematically it makes sense.

And what about those males who couldn't find anyone beneath them in the pecking order? Professor English was one of the first to predict the increase in Australians taking overseas brides - and to predict the subsequent rate of breakdown in those marriages.

For the community as a whole, however, the statistical picture has positive implications.

With numbers in the marriageable age groups stabilising at rough equality, there should be more marriages, and fewer of them will fail. The divorce rate will not drop dramatically, according to Professor English, but it will tend down for the foreseeable future, not up.

But the statistics will never come up with a solution to the "Great Man" shortage. Finding the right partner for every woman...

"A Good Man IS STILL HARD TO FIND"
University to be focal point for national program

A small group of people based at the University will start the new year on an exciting program that could have great benefits for people who live permanently in caravan parks across Australia.

The full results of the program may not be known for at least three years but the dedication of the group will ensure government departments and associated bodies that are involved in the regulations governing caravan parks will receive a range of initiatives aimed at assisting young families who reside in the parks.

The National Advocacy and Dissemination Program (NADP) is the result of six years' hard work by the Hunter Caravan Park Project (HCP), which has its headquarters in a small, portable building in the grounds of the main campus at Callaghan.

The Project was established in 1986 to study the needs of families with young children living permanently in caravan parks. Since then it has set up a number of programs in caravan parks to improve the social, emotional and physical development of young children, some of these being playgroups, after school activities, home/school liaison and vacation and home visits.

It has also established 'off-shoots' such as Homelink which assists parents of 'mobile' children to become more involved in the educational process of their children and Homestart which offers practical support and friendship to families with young children who may be experiencing difficulties due to a variety of reasons. Homelink and Homestart both operate on a network of volunteers.

The work has so impressed the Project's funding body, the Bernard van Leer Foundation in The Netherlands, that it has announced an unprecedented third phase of funding (trtennial) to enable the introduction of the NADP. The Foundation is highly regarded and has world-wide reputation for funding early childhood projects around the globe.

Project Operations Manager for van Leer, Wim Monasso, said the Foundation voted for a third and final phase of funding because of the importance of the work carried out by the HCP since 1986. He said the aim of the Program would be to disseminate the operational model that has been developed by the project.

HCP's Director, Mrs Di James, said the project had come to be seen as an 'expert' on the needs of caravan park families in New South Wales as government departments and community services were increasingly aware of the problems associated with this form of low-cost housing and sought suitable solutions.

"The consultative work has increased our awareness of the critical need to disseminate nationally the operational model and also to advocate nationally for the needs of caravan park families to ensure long term change does occur," said Di.

Strategies for the next three years under the NADP will include lobbying all levels of government, community groups and other bodies in each Australian State to stimulate interest in the development of appropriate strategies when dealing with caravan park children and their families; workshops and seminars in each State to promote the operational model of the HCP; the publication of articles concerning suitable long term and short term strategies to utilise when working with caravan park communities; and seeking access for input into training programs for council administrators and town planners.

Di said the HCP had worked in more than 30 caravan parks since 1986 and its observation by team members was that no two caravan parks were the same.

"Some caravan park communities do not need an outside agent such as the Hunter Caravan Park Project because there already exists within the park community a mutually supportive environment," said Di. "Others, however, are in great need of an outside catalyst to provide the necessary support and information to empower individuals as a first step on the community development continuum."

She said these variations in park milieu and atmosphere were influenced by a combination of locational and physical characteristics as well as many tangible factors such as management style and the self esteem and previous experience of residents.

"It is fortuitous that the Hunter Caravan Park Project has been able to work with caravan park communities during a sensitive and critical period of social and economic change in our society," Di added.

"During this time the Australian dream of home ownership has become a diminishing concept as the demand for low cost housing increases."

"If the Government sees mobile home villages and caravan parks as a low cost housing option, it must ensure that this does not equate with a lowering of standards and the consequent diminution of quality of lifestyle."

"The Hunter Caravan Park Project advocates that quality of lifestyle for these communities can be enhanced by provision of adequate on-site services and facilities, appropriate planning and the training of park management."

The first stage of the NADP involves writing a book for local government departments which includes recommendations on living in caravan parks. The book, entitled 'Recommendations for Local Councils, Needs of Caravan Park Families', will be produced in conjunction with a national newsletter.

Workshops and seminars also will be conducted in the New Year, initially in New South Wales and Victoria, but eventually in each State. Networking with groups, community agencies and industry associations in each State is also high on the agenda.

Student Elected to NSW Youth Council

Election to the New South Wales Youth Council will mean a busy time ahead for one second year Communication Studies student over the next two years.

Claire Edwards, 21 from Toronto, is one of 12 people on the Council, six of whom are under 25 years of age who will be advising the Premier, Mr Greiner, on youth issues. She was one of four new members elected from a list of 10 nominees.

Claire, who is looking forward to her new role, said the Council met once a month in Sydney to discuss a wide range of subjects which include many of the problems affecting today's young population.

After attending her first meeting she said she was impressed with the candour with which these subjects were discussed.

"It was great. If we can purgse the problems affecting young people today with honesty, then we will be able to do something about them," Claire said.

"Some of the problems discussed were underage drinking, sleeping pill abuse, the lack of activities for young people and the way youth is portrayed in the media."

These are worrying issues in today's society and the Council is looking at ways to deal with them," Claire said.

In a busy student's life, Claire also manages to combine her studies with co-editing the Newcastle Diocese Anglican Youth Movement Magazine and also belongs to an Anglican Youth Movement. She plans to expand her interest in writing by taking part in a sub-committee which will produce human interest stories on youth and youth issues.
Dreaming of scoring against Wales

When Anthony Ekert started his Rugby season at University this year, he probably was not even dreaming of scoring against Wales.

But when he found himself trailing Tim Gavin through the scarlet defence at Concord Oval and then on the end of an inside pass, nothing was going to stop him.

Making the New South Wales team has always been an achievement in Rugby, but for a scrum half like Ekert it has been, for the past seven years, the footballing equivalent of climbing Everest.

Since Australia’s Grand Slam in Britain in 1984, Nick Farr-Jones, of Sydney University, has not only occupied the position for the “Blues” but has become recognised as the best half in the world. Ekert made the most of his opportunities against Tucuman providing New South Wales team has always been an achievement in Rugby, but for a scrum half like Ekert it has been, for the past seven years, the footballing equivalent of climbing Everest.

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Anthony Ekert, wisely for a player coming on half way through the game, left the choice of options for his team, and is a most effective leader.

Ekert, wisely for a player coming on half way through the game, left the choice of options for his team, and is a most effective leader.

Ekert cleared the ball in his simple style to five-eighth Jim Allen, who ran wide and turned the ball back inside to back-rower Tim Gavin. Gavin drove forward through a thin Welsh forward defence until held up some 15 metres from the line.

Looking for support, Gavin found it right and left. He opted for the classic inside pass to the left, to Anthony Ekert, who was exactly where a good scrum-half ought to be.

From there, nothing was going to stop Ekert getting his name on the score sheet in an historic match.

Few teams could afford to lose a player considered the world’s best in his position and then go on to defeat the Welsh national team.

New South Wales not only overcame the loss of their skipper, they recorded the biggest victory anybody has ever registered against the Welsh national team, 71 points to eight.

A lot of the credit must go to Anthony Ekert.
PUFFING, PANTING AND RESEARCHING

Puffing and panting are inseparable from vigorous physical activity. The University of Newcastle, uniquely in Australia, now has the technology to analyse just exactly what they represent.

A machine which can not only measure an athlete’s oxygen uptake but measure every breath and analyse it for more than 20 variables is the centrepiece of work being conducted in exercise physiology by Dr Kevin Norton and Mr Brett Squires in the Exercise Physiology Laboratory of the Department of Applied Life Sciences.

The machine's capacities were demonstrated recently when final year Physical Education student and Newcastle Knights' winger, Ashley Gordon, underwent a VO2max (maximal oxygen uptake) test along with NBN 3 reporter, Bruce McKenzie.

Dr Norton showed how the machine monitored each breath, recording the volume of air taken in and expelled and the composition of the exhalations.

The test showed Mr McKenzie's capacity to absorb oxygen notably higher than Mr Gordon's - which surprised an exhausted Mr McKenzie.

But the machine was able to yield some other data: Dr Norton detected from the amount of air breathed in and from heart rates that Mr McKenzie had been working at very close to his physical maximum, while Mr Gordon had apparently borne in mind that he had to play for the Knights the next day and saved his best effort.

There is not another machine in Australia capable of processing so much information from a single breath while an athlete is working.

Its purchase stems from Dr Norton's involvement with the Australian Institute of Sport in Adelaide, where he worked with Australia's track cyclists.

"In cycling, you not only need a high level of oxygen uptake, you have to be able to reach that level quickly," he explained.

"A 4-kilometre pursuit race is over in about four and a half minutes, so it's no good having a high maximum uptake if it takes you two minutes to reach that level: you're going to be in oxygen deficit."

"This machine allows us to plot the subject's uptake, breath by breath."

But you don't have to be an iron man to take advantage of the machine's presence on campus. In fact, it can be of major benefit to people who are worried about their weight and dieting to lose.

The machine can provide, for a small fee, a measure of basal metabolic rate.

Dr Norton says all these tests can help motivate people who want to improve their physical condition by giving them accurate milestones of their progress, but the last is particularly significant for those who are frustrated by rigid diets that never seem to result in weight loss.

"A lot of dieters don't realise that because they are taking in less fuel, their metabolism slows down and so they lose their weight more and more slowly. This machine can provide a valuable indication of how their underlying metabolic rate is going."

Purchase of the machine was helped by grants from the Australian Research Commission, the University of Newcastle Research Management Committee and the Australian Sports Commission which is interested in Dr Norton's research program involving elite athletes.

The Australian cycling squad, currently training at altitude in Mexico City and Colorado Springs, is expected to make use of the equipment later this year to examine in detail the effectiveness of its training program.
Standing Committee of Convocation has made available a range of fine quality mementos for the University. By purchasing these items you will be helping to support Convocation and also the University. The items can be sent as gifts to members of families and friends if the necessary details are supplied.

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<tr>
<th>Glass Commemorative Plate</th>
<th>Sheaffer Pen (embossed with University name and crest)</th>
<th>Pen - Navy Blue with &quot;University of Newcastle&quot; in Gold lettering</th>
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<tr>
<td>$24.99 plus $6 p&amp;h</td>
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<td>Desk Note Pad with Gold Pen (embossed with University name and crest)</td>
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<td>$3 plus $1.50 p&amp;h</td>
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<td>Telephone and Address Book with Gold Pen (embossed with University name and crest)</td>
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<td>Key Rings - with Enamelled University Crest $8 plus $1 p&amp;h</td>
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