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*Judy Cassab and Justice Evatt with the Chancellor's portrait*
Students take action to solve their own problems

The introduction of a new private bus service does not strike one immediately as a major enhancement of an institution as big as the University of Newcastle. The decision by Blue Ribbon Coaches, however, to provide a direct bus service from Maitland to the University is an excellent example of the symbiosis between the University and the community it serves.

Often the University is faced with "problems" - accommodation is a perennial - which are problems only from one point of view. The frustration of these "problems" lies in the fact that, to borrow a common expression, they are also opportunities.

In the case of the Maitland bus service, the "problem" has been that public transport between the University and Maitland has been limited, not geared to lecture times, and sporadic at weekends. This has meant that, while accommodation is relatively plentiful and inexpensive for students in the Maitland area, few students have been in a position to take advantage of it.

But if the problem was as marked as the University community said, the opportunity was there for someone to do something about it.

Students took up the battle when they mounted an imaginative demonstration in May, opening a mock railway station on the northern boundary of the University. While they were not successful in winning an immediate commitment from the railway authorities, they were highly successful in making the community aware of the demand for improved transport from Maitland.

The opportunity was therefore clear, and Blue Ribbon took it up. It remains to be seen whether this particular step will, in the long run, meet the needs of the University and the slightly different requirements of the company's balance sheet, though I am sure we all wish the experiment well.

Again, what is a problem from one angle can be perceived from another as an opportunity. The University has students looking in large numbers for housing; the city has a population which is at once diminishing and aging, city retailing has been the sector slowest to recover from the earthquake and the city has buildings which have been lying idle since the earthquake; the solution seems obvious, and was well expressed in a very thorough paper prepared, once again, by enthusiastic students.

(Two things of which the whole University community can be proud are the willingness of our students to take steps to solve their own problems and the professionalism they have brought to their presentation.)

Of course, the scale of the idea presents difficulties. Refurbishing some buildings is quite as expensive as building from the ground up and, if the total cost rises too far, the rental required to recover the capital costs will place the accommodation out of the reach of students.

But one point emerges with great clarity: the city and the University can be of great benefit to each other. In fact, while the University has long enhanced the city's cultural opportunities and attracted new residents and visitors to the region, with its budget for salaries now exceeding $80 million a year, it is difficult to see how the city and the region can develop in isolation.

Yet the perception remains in some quarters that "University" is about education only, an adjunct to the city's life that take place "out at Shortland".

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The Lord Mayor of Newcastle, Alderman John McNaughton, and the Vice-Chancellor, Professor Keith Morgan, convened a public meeting on housing students in the City of Newcastle.

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This is one of the reasons the University is holding Open Days on September 7 and 8 this year, the first since 1988 and the first to incorporate the former Hunter Institute of Higher Education, the Conservatorium and the Central Coast campus at Ourimbah.

Letting the people of the region see the breadth of the University's daily activities, not only in teaching and research but also in terms of housing, transporting and feeding the University population, may help to change some perceptions and help to extend the mutually beneficial relationship we enjoy with our region.
Scanning Tunnelling Microscopy (STM) has been used to image a number of biological molecules with varying degrees of success. In this initial report, STM images of thrombospondin (TSP) are presented which clearly resolve the morphology of this molecule.

Thrombospondin is a complex, multi-function, multi-domain glycoprotein initially identified in platelet alpha granules and involved in platelet aggregation - an important event in blood clotting. Subsequently the ubiquitous nature of this glycoprotein has been recognised. It is synthesised by blood vessels, circulating white blood cells and fibroblasts from a variety of organs and tissues. The molecule, composed of three covalently linked dumbbell shaped protein chains is secreted into the extracellular matrix in which cells lie. It appears to be important in influencing certain elements of cell behaviour such as migration and division. Abnormal cell migration and division are key characteristics of cancer cells. Our interest in TSP centres around its interaction with cell receptors which bind the molecule. It is through this receptor binding that TSP influences cell behaviour. It is hoped that STM will provide the means to observe this interaction and visualise any configurational changes induced by binding.

Images of TSP were taken in an air operated STM and samples were found to be sufficiently conducting such that a metallic overlayer was not necessary, thus avoiding the destructive effects of a vacuum environment and coating which are required for electron microscopy (EM). Samples were prepared on a freshly cleaved substrate of highly oriented pyrolytic graphite (HOPG). The HOPG surface can be atomically flat over areas up to several microns providing a featureless background on which deposited molecules are easily observed.

Figure 1 shows a STM image of TSP, which we believe consists of a pair of molecules attached to the steps on the graphite surface. It should be noted that such images containing molecules were only obtained after a large number of scans since this molecule tends to aggregate when deposited in high concentrations. The insert (from ref. 1) is a rotary shadowed EM image of TSP prepared on mica and carbon coated. EM imaging has shown the TSP molecule to be 60-70nm in length though it frequently exists in pairs or even aggregated of several molecules.

In order to identify the individual components of these molecules a model of TSP has been overlayed on the same image as figure 1 and is shown in figure 2. The TSP monomer consists of a small globe like region approximately 8nm in diameter connected by a thin chain to a larger globular region C approximately 17nm in diameter. The three monomers comprising the TSP molecule appears to be missing one of the larger globular C regions as indicated by the arrow. It is possible that this region is hidden underneath the right hand molecule, although more likely, this region has been severed from its connecting chain.

We have shown that the STM has the ability to image biological molecules such as TSP and promises to provide a valuable contribution to the field of ligand/receptor research. To this end future work in this area will include an STM study of other protein molecules which bind TSP and the interaction between these molecules and TSP itself.

References:
The NBN Telethon Cancer Research Unit, headed by Professor Gordon Burns, has already established itself as a world-class centre of research excellence.

Work at the unit is basic research, aimed at understanding what makes cancer cells behave as they do, rather than looking for an instant or complete cure; that, according to Professor Burns, will be for other, applied, researchers to pursue with the type of information being gathered at the NBN lab.

In particular, the Unit is examining why certain cancers appear to move around the body.

For a cancer to metastasise, or "spread", the cancer cells must move.

But normally, after the body has gone through the rapid growth and complex organisation involved in development in the womb, the only cells that move are those in the blood and the immune system.

Cancer cells appear to revert to the primitive state of embryogenesis to achieve their mobility.

However, not all cancers "spread", and some cancers spread to specific parts of the body. For example, some cancers will spread only to the lymph nodes; others will spread to the brain, but only to specific locations within the brain.

According to Professor Burns, the patterns of mobility appear to be related to the patterns of protein in the body.

Cells seem to recognise their environment during embryogenesis, and the recognition signs lie in the proteins that make up the cells and the surrounding matrix through which they move. Once a cell has recognised its "receptor" in the environment, there it stays.

It stays where it belongs unless a biochemical chain reaction takes place, freeing it again.

Theoretically, if the trigger which sets the cancer cell free of its proper receptor can be identified, then it could be switched off: metastasis would not occur, and existing surgical knowledge would be enough to not only remove the carcinoma but also to remove the fear that the cancer might appear elsewhere later.

One difficulty in finding the answer is that there are some 50 or more different proteins which combine to form receptors. The number of combinations and permutations is daunting.

Much of the work of the unit involves examining DNA sequences in order to study the patterns of metastasis which may be linked to particular sequences.

But the proteins are only one element in the chain reaction; the answers may lie in the lipids, for instance, so they are also under examination.

One useful tool in the search has proved to be one borrowed from the Physics Department.

A postgraduate researcher, on reading that the University had purchased a scanning tunnelling microscope for the study of materials, wondered whether it might allow his colleagues to view the protein receptors in human tissues.

Professor Ron MacDonald and the Head of Physics, Dr John O'Connor, encouraged the cancer unit to try the microscope and, indeed, it worked just as advertised, allowing Professor Burns's team to view even the atoms which make up the protein receptors, confirming much of their previous work and supporting their hypotheses.

The only other cancer researchers to actually view tissue at such a magnitude are believed to be at Oxford, where they are examining a different aspect of the problem.

In fact, the great majority of researchers working in the Professor Burns's field are in the United States, where the Newcastle Unit's research papers have invariably been published; there is no similar research elsewhere in Australia.

The Unit's success so far has been achieved with help from a variety of sources.

The NBN Telethon covers the cost of employing Professor Burns and his assistant Dr J. Scott. But, in addition, the Unit has three post-doctoral students, including one who has moved from England to take part in the Newcastle research program, three or four doctoral students, three postgraduate research assistants and a research aide.

They are supported by grants from the National Health and Medical Research Council - the Unit is proving very successful in applications for NH&MRC grants - the National Heart Foundation, the NSW State Cancer Council, the Royal College of Surgeons, the Leo and Jenny Leukaemia Foundation and the Ramaciotti Foundation.

As well, individuals have been of great help in the work itself. Professor Burns noted the contribution of Dr Michael Agrez, a specialist in colonic surgery whose years of studying the links between tumour cells and their matrix has produced a specific colonic research program within the Unit, and Dr Bill Gillespie, an orthopaedic surgeon who has helped in studying the role of receptors in the formation of bone.
GRAPHICS FOR THE BLIND

If you're a parent, you have obviously spent many hours with your children reading books and showing the accompanying pictures. As your child falls slowly asleep in your lap, or on their bed, the joy of reading and of being able to describe the scene through pictures is more or less taken for granted. Unfortunately, it's a joy that some do not experience. If you're visually impaired, the words come to you through the use of Braille - but the pictures are a different matter.

It's very difficult for many people affected by blindness to 'put together' words and pictures, mainly because a system which is able to 'read' graphics has not been viable.

However, that could soon change through the innovative work of a University researcher that has gained recognition from the Minister for School Education and Youth Affairs, Mrs Virginia Chadwick.

Assoc. Professor Don Parkes, from the University's Institute of Behavioural Sciences, and the Principal of North Rocks School for the Blind in Sydney, Ms Sue Ingram, recently received $25,000 under the Special Education Equity and Innovation Grants Scheme to enable the development of audio-tactile graphics for use by blind children and children with other disabilities in New South Wales schools.

Mrs Chadwick presented a cheque at the University for the project, saying that the grant program aims to provide equity in the provision of educational services for children who have difficulty in coping with mainstream education. She said the State Government was keen to foster the growth of new, high quality instructional technology in education which will help children with their learning.

Professor Parkes' project, known as Nomad (named after a guide dog belonging to a former University blind student, Mr Ray Paul) is an audio-tactile graphics interpreter and uses synthetic speech to describe a wide range of features on raised line pictures and other graphics.

A number of geographic calculations such as length, area and perimeter of straight or curved lines, may also be calculated and lines and areas can be 'painted' with sound in up to nine frequencies. When a line or area is touched, a unique sound is heard and a description of the feature being represented is spoken, if required.

"The system may also be used to play music and includes a simple word processing system," said Don.

"Text and sound painted files may be printed and text information, perhaps part of a book or an article, can be scanned and placed onto the Nomad system in association with pictures. Line graphs and pie charts can also be handled. When reading line graphs a number of parameters, such as largest and smallest value and the general trend of the graph values, are spoken to the blind user."

Mr Richard Dear from the University's Computing Centre has been working closely with Professor Parkes during the past three years, much of the work being done at weekends. The two have already spent quite some time at the North Rocks School and most of the grant will be devoted to the purchase of equipment which will become the property of the school.

"The aim is to enable the preparation of high quality graphics for the blind and it is hoped that graphic kits will be produced and used widely in Australia and overseas," Professor Parkes explained.

"There's tremendous potential for development - I don't think Nomad as a system will ever be finished because new technologies are surfacing all the time."

Colleagues at the University's Special Education Centre - Dr Phil Foreman, Mr Rick Frost and Dr Judy Cowley, among others - have suggested that the system has potential in other aspects of Special Education and following the purchase of one Nomad they will be involved in the Institute's programs as well as developing their own independent projects.

"We are exploring other related developments, including, for example, a unique environmental information access system for blind people. Integrated with Nomad, it is to be known as Walkabout," Professor Parkes said.

"Royal Guide Dogs Associations of Australia, based at Kew in Victoria, have expressed interest through Dr Tony Heyes, the Director of Research and Development of Sight Enhancement, Education and Technology. Dr Heyes was closely involved with the very first steps in development of Nomad four or five years ago.

"And in the United Kingdom, the Nuffield Trust has funded a program of collaborative work between a university and a school in which the Nomad system is the focus, the view being to evaluate application of the system to the teaching of national curriculum subjects to blind students."

Professor Parkes, who is currently on sabbatical leave, is spending time at King's College in London working with Dr Andrew Tatham, the Curator of Maps for the Blind in the United Kingdom, on possible applications of Nomad to the Underground railway system and other urban rapid transit systems in London.

As Professor Parkes said, the potential for development is tremendous.

IBM PRESENTS PERSONAL COMPUTER

In a surprise at the cheque presentation by Mrs Chadwick, IBM Australia donated a PS/2 Model 60 Personal Computer valued at $13,000 for use in the project.

The Program Manager, Corporate Relations for IBM, Ms Louise Davis, handed over the computer, saying that her company had a close association with the North Rocks School and was deeply interested in the development of Nomad.

The IBM computer will drive the Nomad applications and enable production of high quality graphics using CAD software. North Rocks School will use part of the $25,000 grant to augment its Nomad facility with a digitiser, plotter and other equipment to permit cost effective previewing of the graphics produced for use with Nomad.

The Australian company which manufactures and exports Nomad, Quantum Technology, has also shown keen interest in the North Rocks School project and has donated a Nomad for use by pupils.
Grant for study of whiplash injury

The quest to implement new diagnostic and treatment techniques in the research and treatment of whiplash injuries has been rewarded with a grant of more than $500,000 to the University.

The grant, totalling $562,310, provided by the Motor Accidents Authority of New South Wales, has enabled the establishment of a Cervical Spine Research Unit under the direction of Associate Professor Nikolai Bogduk, of the Faculty of Medicine, in association with the Professor of Orthopaedics, Professor Bill Gillespie.

A spokesperson for the Motor Accidents Authority, which oversees the compulsory third party (CTP) personal injury scheme in New South Wales, said the Authority is delighted to be fostering the development of a facility which will be of particular benefit to motor accident victims.

The grant has provided for establishment costs of the Unit, accommodation and part-time support staff.

It will also allow for two medical postgraduate scholarships to enable medical practitioners to undertake clinical research on a full-time basis.

The Unit is located at the Mater Misericordiae Hospital at Waratah.

Professor Bogduk says the Unit will provide a comprehensive assessment service for patients with neck pain and headache following whiplash injury, bringing to bear new diagnostic techniques developed at the University. The Unit will also conduct evaluations of current and new forms of treatment for neck pain and headache.

"This grant will enable much needed resources to be made available to patients whose complaints have remained poorly understood and untreated," Professor Bogduk said. "It will help clear a backlog of patients who have approached the University and the Pain Clinic at the Mater Hospital for help in the past, some of whom have been waiting up to two years for treatment."

"It has also allowed the purchase of a Radio Frequency Lesion Generator, a piece of medical equipment used by neurosurgeons in the treatment of pain, which can be employed to treat neck and head pain associated with whiplash injury as well as other forms of pain."

Professor Bogduk said there is a major need to improve and extend community services for the treatment of chronic pain and this grant goes part of the way to filling this need.

"The grant is unique in that it provides scholarships for medical graduates to undertake research in a clinical setting and will be of immediate potential benefit to patients," Professor Bogduk said.

"While much is known about the mechanics of whiplash from laboratory research, medicine has lagged in implementing new diagnostic and treatment techniques on a scientific basis."

Professor Bogduk said the University was very appreciative of the grant which would allow new procedures to be properly evaluated to University standards.

He said that while the research would be carried out under the auspices of the University, techniques found to be worthwhile could subsequently be passed on to the medical community at large so that they can be made available to wider sectors of the community.
UNINEWS

Provocative Critique of Health Education


Professor Laura was in attendance at the New York launching of the book last year in which a number of distinguished scholars praised the volume for its outstanding contribution to the field.

Professor Collins of the Harvard Medical School applauded the book for its "insightful, comprehensive and extremely innovative approach to the health education arena". In his review of the book, Professor Vernon Howard, of the Harvard Philosophy of Education Research Centre wrote, "I consider this volume to be a major contribution to the foundations of health and medical education and it is immensely detailed and a highly original contribution."

*Philosophical Foundations of Health Education* is a very provocative book. The authors begin by arguing that despite the impressive array of technological achievements mustered by medical science, the health of the general population has not substantially improved during the present century.

Although there are areas in which progress seems to have been made, the success enjoyed is due less to the wonders of modern medicine than to changes in lifestyle such as improved sanitation and nutrition.

The University's total enrolment is 13,000 students on 1990.

Figures released by the University's Management Information Unit (MIU) reveal that nearly 10,000 students are studying for a Bachelor degree and that the largest individual drawing area is Newcastle-Lake Macquarie with 6,962 students.

The University's total enrolment is 13,035 students while there are 271 students from overseas studying on campus. The break-up of enrolments is:

- Full-time 9,291
- Part-time 3,419
- External 325; plus
- Overseas 271

The MIU figures show that 6,900 students are female and 6,135 male. A total of 9,985 students are studying for their Bachelor degree while a total of 1,461 are enrolled in other undergraduate courses. Students studying for a higher degree (PhD, Masters) total 617 while 658 students are enrolled in other postgraduate courses. Non-award courses account for 31 students while enabling (bridging) courses account for six students.

The survey figures are based on students' current permanent home postcodes and the accompanying schematic representation details the full enrolment.
Hunter Water Board supports environmental cell biology research

The Bioanalytical Research Group of the Department of Biological Sciences has launched an investigation into the bioaccumulation of pollutants found in sea water near Newcastle.

The study aims at determining levels of heavy metals and organo pollutants (such as pesticides) in water in Newcastle Harbour, Merewether and Swansea and, most importantly, relating these levels to changes in cell metabolism of fish, molluscs and plankton taken from each region.

The keystone of this research is the $150,000 gas chromatograph mass spectrometer which was commissioned in the laboratory in April. This GC-MS machine allows simultaneous measurement of both pollutants and intracellular substances. By reference to an extensive database, unknown substances can be identified and "metabolic profiles" of the well-being of the cell or tissue can be generated. It thus enables comparisons to be made between the health of animals caught at various locations.

The Water Board-supported study will be carried out by three Honours students under the supervision of the Bioanalytical Research Group. Ms Estelle Avery will be concerned with the differential bioaccumulation of heavy metals and organo-pollutants, and the associated effects on lipid metabolism in the liver, brain and muscle of Black Bream, Acanthropagrus australis.

Heavy metals and organo-pollutants have been shown to associate with matter in the sediment. Thus marine organisms that live in the sediment or feed on organisms living in the sediment are vulnerable to these pollutants.

The Black Bream was chosen for the project as bream are mostly bottom feeders, seeking out marine worms, crustaceans, shell fish, green weed and small fish. Using the new GC-MS facilities, which have just arrived in the laboratory, it will be possible to detect a vast range of organo-pollutants and lipid compounds present in the tissues of the fish. If a particular lipid compound is always increased or decreased in the presence of a particular pollutant, a correlation may be drawn between the two. In this way an attempt will be made to assess the effects of the pollutants on lipid metabolism.

It is envisaged that the presence or absence of specific biological molecules marking the first sign of toxicological stress will be identified. Ultimately this may lead to the future development of a simple analytical method to assess whether pollution in a particular aquatic environment is approaching a critical level.

Ms Kathryn Walsh aims to determine heavy metal and priority pollutant contents in the shell and tissue of a marine snail (Austrocochlea constricta) and possible variation in their bioaccumulation between the selected sample sites, Newcastle Harbour, Merewether, Swansea and Wangi. Metabolic profiling of the tissue and shell of the marine snail will ascertain if there are metabolic actions of the pollutants and whether the variation in shell banding pattern of the snail reflects the degree of pollution present in its environment.

Heavy metal contents are to be determined by extraction with nitric and hydrochloric acid and analysed via AAS. Metabolic profiles, using both lipid and water soluble components of the snail tissue and shell, are to be performed using GC-MS. Water soluble components will be processed via ion exchange chromatography to separate anions, neutrals, cations and zwitterions to monitor, for example, obscure metabolites, sugars, amino acids, nucleic acids and purines, respectively. Shell banding patterns of the marine snail are influenced by the quantity and quality of their food supply, marine algae. It is thought that algal biomass is influenced by pollutants and this affects shell banding patterns. Chlorophyll content (a measure for algal biomass) is to be determined for each site by extraction with acetone followed by analysis using spectrophotometry. Pigment concentrations of four categories of shell banding patterns are to be determined by extraction with hydrochloric acid and analysed via spectrophotometry. If the above relationship holds for all selected sample sites, there will be a correlation between shell banding pattern, chlorophyll concentration of algae and pollutant levels in the environment.

Ms Jennifer Watkins has the difficult task of assessing bioaccumulation in plankton. Plankton consists of many different organisms and is the base line for many food webs.

The study represents the first project undertaken by the newly formed Bioanalytical Research Group. The Group consists of Dr Hugh Dunston, Dr Brian Conroy, Ms Pam Lake, Mr Bruce Petersen (Hunter Water Board), Ms Estelle Avery (Honours student cutting-up Black Bream) and Ms Jennifer Watkins (Honours student).
"A DYNAMIC VISION FOR THE PORT OF NEWCASTLE"

Many people find it difficult to make the decision to change careers. One graduate of the University of Newcastle made such a decision in the early '70s and embarked on a steady climb to his present position. Mr Geoff Connell, Managing Director of the Hunter Ports Authority, resigned from teaching to take up a career which has seen him involved in various facets of business.

Mr Connell started his working life as a trainee with the Reserve Bank after leaving school in 1965. Feeling that his future did not lie in this area, he enrolled at the University and graduated in 1970 with a Bachelor of Commerce and Graduate Diploma of Education.

His first teaching position was at Griffith High School where he taught Commerce and Economics, Social Science, Geography, Book-keeping and Business Principles. A subsequent posting to Harden/Murrumburrah High School capped off a three-year teaching career.

Mr Connell recounts stories about his teaching career with obvious enthusiasm. He says he really enjoyed teaching and liked the life in Griffith.

"Griffith was a great place to live. I really enjoyed my time there and it was an interesting experience with its large ethnic population.

"But it would have been fabulous if, over the next hill, there'd been an ocean or something. It took me eight hours to drive to the water," Mr Connell said.

After his resignation from the Education Department, he established an importing business with a friend, specialising in handicrafts from Indonesia, manufacturing the items, exporting, and importing into Australia and other countries. Four years later, he sold his shares in the business to take up a position as a research economist with the Hunter Valley Research Foundation.

Whilst with the Foundation, he managed two specific consultancy projects, a census of all retail outlets in the Hunter Region and a Cost of Housing Inquiry for the Local Government and Shires Association.

In 1979, a new organisation, the Hunter Development Board, was being formed. Geoff was appointed as Marketing Manager/Research Economist, becoming the General Manager in 1981.

In tough economic times in the early '80s, the Board set up the Hunter Group Apprenticeship Company, which became a major exercise for the Hunter Region, and also created the Hunter Port Operator Training School which is still in operation and is administered by TAFE.

"These two initiatives did a very good job at the time and got people back into the workforce," Mr Connell said.

In 1985 he took up a position as Business Manager for the Maritime Services Board, a position he held until he became the Managing Director of the newly formed MSB Hunter Ports Authority, his formal appointment being made in November of last year. What of his role with the Hunter Ports Authority and the direction the Authority will take for the future of the Port?

"Well the Port is going through one of the most radical changes in its history at the moment," Mr Connell said.

"We are a mid-water port, not a major capital city port, but we're not a small regional port either.

"We sold out of cargo operations in June last year and privatised the coal handling operations. We can now concentrate on being the provider of navigation services and basically being a landlord.

"We have rationalised our workforce and will now work on becoming more market-focussed," he says.

He sees the Ports Authority as the facilitator of trade and business through the Port.

With that in mind, he seeks to "blur the boundaries" between the Port and the Port's customer.

"The Port users and the steevedores have their independent roles to play and we would seek to encourage their growth.

"I am very happy that this organisation has gone from being the Authority that did all the work in the Port to being the facilitator.

"We are currently writing a business plan which is using a market-focussed approach," he says.

Part of the radical change of face for the organisation was the cut back on staff numbers. In a program that had no forced retrenchments, about 170 people accepted voluntary separation packages and 90 employees transferred to the private sector, allowing the staff rationalisation to take place. The Authority now has 230 members of staff.
Another aspect of the change is consolidation of general cargo facilities and Port administration over to the old Newcastle Dockyard/Basin area. “This represents one of the most significant general cargo opportunities on the east coast of Australia. It’s a seven year project and in itself will be the physical embodiment of what the Hunter Ports Authority is aiming for. “The City will be able to see it develop as we start demolishing the Dockyard buildings and commence rebuilding. “We are taking the view that the coal industry, the BHP and the bigger players in the Port can look after their own marketing and their own affairs. “The one thing that is very clear is that there is a lot of general cargo opportunities here in Newcastle. We are going to create the environment for them to grow,” he says. “People see containers as being one of the most important aspects of the Port, however this is not necessarily the case. There are many other types of cargo such as timber and aluminium for example, which given the right climate, can flourish here. “I see us as being well on the way to turning a Government Statutory Authority into a market-focused organisation. “It's going to require the development of new skills, but it also means that we will continually refine the organisation. “Our objective is to be the best Port Authority in the country. “It doesn't mean we are going to simply take business from Sydney, Melbourne or Brisbane's container trade. What it means is that we are going to concentrate on what we do best. The niche markets we have identified for ourselves, we will constantly try to improve upon. “So with these initiatives, pulling all the players together, co-ordination and facilitation, we have a successful formula, and it's working! "The unique infrastructure of this Port puts it in a position to provide absolutely first class major resources to the east coast for the next 50 years. "The real point that's going to come out is that Newcastle won't be seen as solely a coal and steel port. "We will work with those industries to continue their growth and in addition, expand aluminium, timber, general cargo and container services." he says.
Nearly 2,400 graduands, their family and friends made this year’s graduation ceremonies the biggest in the University’s history.

Degrees were conferred at eight ceremonies, on May 3, 4, 10 and 11, and each attracted a full attendance in the Great Hall. There were about 200 graduands more than in 1990.

The University awarded honorary degrees to six distinguished citizens: Mr Barry Flanagan (Doctor of Engineering); Mr Kevan Gosper (Doctor of Science); Mr Vince Millington (Master of Arts); Dr Roy Mills (Doctor of Medicine); Mrs Paddy Rankin (Doctor of the University); and Mr Roland Robinson (Doctor of Letters).

University Medals were presented to: Tan Chye Hin (Architecture); Barry Hodges (Philosophy); Lindy Henderson (History); Bruce Tulloch (Psychology); Wayne Wolfgang (Electrical Engineering); and June Roberts-Thomson (Biology).

Awards presented for the first time were the Master degree in Environmental Studies, the Master degree in Industrial Education, the Graduate Diploma in Welfare Law, and the Associate Diploma in Occupational Health and Safety.

The Newcastle Boys' High athletics team of 1947 - winners of the Combined High Schools' Country Championship. Seated fifth from the right is Kevan Gosper, later to distinguish himself as an Olympic sprinter and administrator; at the extreme back left is Winston Dunlop, who presented Mr Gosper for his honorary Doctor of Science degree at the University this May.
QUEEN’S BIRTHDAY HONOURS

Assoc. Professor Max Maddock, from the Faculty of Education, was awarded an AM - Member of the Order of Australia - in the Queen’s Birthday honours list for his services to conservation and environment. With typical modesty, Professor Maddock attributed the honour not so much to his own work as the driving force behind the establishment of the nationally renowned Shortland Wetland Centre, but to recognition within the community of the importance of conserving our natural environment. His comment to the media that, when he began working on the project, most people regarded a swamp as a dirty and useless piece of land was undoubtedly accurate. But it belied the vision required to combat the accepted wisdom.

That people around Australia now recognise the value of the Shortland Wetland as a natural resource and a uniquely preserved and accessible habitat for wildlife may well have contributed to the award; but the recognition has not come independently of Professor Maddock’s work. His energy and enthusiasm were in large part responsible for the community’s awareness of the “swamp” as a habitat and its recognition of the wetlands as an invaluable community asset.

The composer Mr Nigel Butterley, formerly a senior lecturer at the Newcastle Conservatorium, was also awarded the AM in this year’s list, for his services to music.
The Ranger uranium mine, on the edge of Kakadu National Park, is to gain the benefit of a unique research program developed by Dr Garry Willgoose, Lecturer in the Department of Civil Engineering and Surveying.

Using a CRAY supercomputer, Dr Willgoose has developed the world's only program capable of analysing soil erosion over geological time.

The Federal Government requires that the spoil heap at the uranium mine be stable for 10,000 years, to ensure that radionuclides do not contaminate areas near the mine. But most programs can predict likely erosion patterns only in the short term.

Dr Willgoose's program can analyse and predict erosion patterns over periods as long as 100,000 years - technology much more appropriate to radionuclides with a half-life of about 80,000 years.

It can even allow for changes in factors such as increases, or decreases, in regional rainfall caused by broad environmental conditions like the greenhouse effect. In fact, allowing for changes in rainfall is a particularly simple matter.

Predicting how rain will run off the spoil heap and change its shape, and how the rain will then run off the changed spoil heap to further change it, enables steps to be taken to direct the run-off away from sensitive areas, or to control the run-off in order to restrict further erosion to specific patterns.

Dr Willgoose's program can also create a model of what will happen after the precautionary steps are taken.

If it sounds like a formula with endless variables, that is why he needed to use a CRAY, one of the fastest computers in the world, at the Supercomputing Centre in Pittsburgh.

His work for his PhD began at the Massachusetts Institute of Technology after he graduated from the University of Newcastle in both Science, with a major in Mathematics, and Civil Engineering, with the University Medal.

Having worked for several years as a structural engineer and hydrologist in Australia and South-East Asia, he was fascinated by the fundamental interdependency of erosion, flooding and landscape form over time.

If floods and erosion shape the landscape over geologic time, and if run-off and erosion are determined by the shape of the landscape, then just how do the three interact over time?

The answers, when identified by Dr Willgoose's research, were logically applicable to the rehabilitation of mining areas because they are artificial landscapes. Knowing why landscapes look the way they do means that artificial landscapes can be designed, rather than taking on a random shape, and can be designed to remain in equilibrium with the surrounding natural environment.

Having completed his doctorate in the Department of Civil and Environmental Engineering at MIT in 1989, Dr Willgoose turned down a number of opportunities in the USA and Australia to come back to Newcastle, where the computer facilities in the Engineering Faculty are as good as any in Australia and where the Department of Civil Engineering and Surveying has an international reputation in water resource studies.

Dr Willgoose is now a member of the water resources and environmental engineering group within the Department. This group includes Drs Wal Field, George Kuczera and Brian Williams, and research students Martin Lambert, Paul Raper and Wan Sing.

The University will introduce in 1992 a degree course in Environmental Engineering and, if anybody asks what is meant by that term, Garry Willgoose's work is a pretty good illustration of what it is and why it is important to Australia.

The slides show the evolution of a computer generated landscape over geologic time, starting from an elevated plateau to a landscape similar to that around us. As part of a research program to calibrate his model to a field catchment in the Poolkolbin, Garry generated a computer animation of how the catchment evolved to its present form. These slides are taken from this movie.
Mr Allan Gamble

Architect. He was engaged in private practice in Perth before moving to Sydney where he served as an Alderman on Mosman Council between 1944 and 1968. His association with universities began in 1933 when he worked on drawing and details of the Science Building of the University of Western Australia. In 1945 Allan was appointed as Senior Lecturer in Architecture at the University of Sydney where he had responsibility for courses in planning and design.

In 1949, he went on sabbatical leave in England, America and Europe where, in addition to studying architecture, he was also charged with enquiring into how overseas institutions managed their public relations. The University of Sydney was about to launch a public appeal for its Centenary in 1952 and not long after his return in 1950 Allan was seconded for one year as Information Officer.

In late 1951 Allan was appointed as Information and Public Relations Officer, the first such appointment by a university in Australia. His major undertaking was the Centenary Appeal but coupled with this was the first of his books on the university. He also conducted an art gallery on campus in an honorary capacity between 1955 and 1972 and one of his lasting initiatives is The Gazette, the university publication which he edited for 20 years until his retirement in 1972.

Because of his ongoing involvement and outstanding service to the University of Sydney, the institution this year admitted Allan to the Honorary Degree of Master of Arts.

The vision Mr Gamble had earlier this year was for the book originally completed for Convocation to be more thoroughly enhanced by colour.

He set to work on compiling a limited edition entitled The University of Newcastle. A Vignette of which about 20 copies have been hand-finished. The total edition will number only 30.

Each book is individually numbered and signed by Allan and text has been expanded to complement 24 pen sketches which have a new breath of life through watercolour. These sketches include spotted gums on campus, the eastern side of the Great Hall, the Drama Theatre, the Mathematics Court, the Staff House, the Biological Sciences Building, the entrance to the McMullin Building and the sculptured Coat of Arms in the Great Hall in addition to other scenes.

There also are 11 black and white pen sketches which depict the Social Sciences Building, the Engineering Court, the Architecture Building, the Great Hall Organ, the Auchmuty Library and other buildings.

Mr Gamble, who uses basic implements and has his pens and watercolours set up on a small table in a spare room of his Avalon unit where he now lives, says great interest has been shown in his new book by people at the university or associated with the university. Anne von Bertouch has already purchased three copies.

"I'm very pleased to see that the volume has been received favourably in it's home territory," he said.

"The whole exercise has given me great pleasure.”

The pleasure he has found is reflected in his donation of the first copy of the edition to the university - a gift that will ensure his continued association with the Newcastle campus.

Copies of Allan Gamble's Campus at Shortland can be purchased for $7 from the Convocation Officer, Margaret Wells, whose office is in the foyer of the Hunter Building. Margaret can be rung on 21 6464. Postage is free on order placed by November 30.

Copies of The University of Newcastle. A Vignette are for sale at $150 a copy. Inquiries to Keith Powell in the Information & Public Relations Unit, in the Hunter Building. Keith can be rung on 216458.
The uphill run wasn't so bad - it's what faced the team at the top of the rise that was completely unexpected.

Unknown to members of the University's 1973 rugby league team was the little 'surprise' their coach had in store for them. The jogging and the physical exercise were expected, but the upturned VW...

If the look of surprise (obviously turning to wry grins) was on their faces, it didn't phase Claude Cassegrain. The burly muscles righted the VW, the team jogged back down to the sports oval and training resumed without barely a hiccup - well, nearly.

The other half of the story is that Claude, the coach of the Uni team in conjunction with former international, Allan Buman, was in the library. Realising he was late for pre-season training, Claude jumped into his VW and took off for the sportsfields.

"The new college of advanced education was being constructed in those days and somewhat distracted me," Mr Cassegrain explained. "The car rolled over, I got out, ran down to the team and we didn't lose two minutes. Didn't like the car anyway!"

Mr Cassegrain, whose Bachelor of Commerce was conferred in 1974, believes he is the only student to have the dubious honour of 'writing off' a car on the University campus. It's one of many stories he tells of his days at the University.

Mr Cassegrain is now company secretary of Expressway Spares at Port Macquarie, the largest earthmoving equipment spare parts supplier and wrecker in the Southern Hemisphere. He also plays an important role in the Cassegrain family's diverse interests on the Mid-North Coast which range from Expressway Spares through to a winery, close farming projects and involvement in the Hastings 2000 project.

"Although we are very busy here on the Mid-North Coast I still maintain an interest in Newcastle University and have always been a member of Convocation since I left," Mr Cassegrain said. "I vote occasionally in elections and retain a very close feeling for the University, its students and staff - I was especially fond of the late Professor James Auchmuty."

The close association stems not only from being a student but also from being involved in the running of the University. Mr Cassegrain was the first student member of Senate and a student member on the then Faculty Board of Economics and Commerce.

"When I was elected as the student member on Senate I was given a telephone, a mail box and an office about twice the size of some Senior Lecturers - that caused a bit of talk," he said with a grin.

Mr Cassegrain accepted a cadetship with BHP when he left school and studied marine engineering at Newcastle Technical College before enrolling as a part-time student in Commerce. Part-time studies turned to full-time studies and Mr Cassegrain was transferred in his employment to BHP's head office in Sydney in 1974 where he worked as a Cost Accountant for the company's subsidiary, Australian Wire Industries.

The move to Sydney actually 'broke' Mr Cassegrain's tie with Newcastle because he flew from Sydney to home in Port Macquarie whenever he travelled north.

"In 1976 my father had a heart attack and I took 12 months leave of absence," explained Mr Cassegrain. "BHP rang me at the end of the year and asked my intentions. I said if they offered me a directorship I'd come back but for some reason that offer didn't come through.

"I resigned from BHP with good feelings and still believe I owe the company. It put me through two courses and, in my opinion, the company has very high ethics and moral standing. It's very professional and I try to emulate that standard, but I don't believe I've met it yet."

Mr Cassegrain's family interests have consumed most of his energies since 1976.

"The concept has led to the need to solve problems regarding soil acidification and we have entered into a collaborative research agreement with the CSIRO. This has led to improvements in soil slotted technology involving the incorporation of ameliorants (gypsum and lime) and a joint venture, known as CASSIRO Pty Ltd, is further developing and commercially exploiting the slotted technology."

CASSIRO has a unique relationship with CSIRO, its mission statement being 'The Commercialisation of Australian Research and Development'.

The company is also charged with the commercialisation of a CSIRO patented 'Artificial Wetland System' for the treatment of waste water. To date, the research results are very exciting with the prospect of its becoming the economic

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Mr Claude Cassegrain

A proposed joint venture to establish a nickel pelleting plant in New Caledonia fell through after five years of development work, and this had a big bearing on his future goals.

"We adopted a policy to keep our activities in the Hastings Valley and to be selective with whom we entered into partnership," Mr Cassegrain said.

I have since assisted one of my brothers in establishing a winery and the family also has developed a unique and very successful 'close farming concept' where owners enjoy individual ownership of freehold land and share in fixed capital and running expenses.

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"Artifical Wetland System"
solution for sewage treatment for both large and small communities. The Cassegrain family has acquired large tracts of land in the Port Macquarie district in the past 30 years and there has been pressure, according to Mr Cassegrain, to fragment the land for urban and rural subdivision.

"We've considered the reasons why Port Macquarie is growing at a fast pace - as is the whole East Coast - but are disturbed at the region being the fourth-most socially and economically vulnerable in Australia," Mr Cassegrain said.

"We've spent a considerable amount of money in preparing pre-feasibility studies for a social-economic urban plan known as the Hastings 2000 Project which could be a model for Australia's future urban pattern."

The project seeks to create an integrated urban, rural, industrial and recreational development which will use the natural resource base of the Hastings to create a community attuned to the needs and commercial opportunities of the 21st century.

Its objectives include improving the economy of the Hastings region, reversing the current high levels of 'social vulnerability' and providing a model for Australians to improve economic performance, and care for the environment. A key element is the establishment of an independent university and the project has attracted the attention of local, State and Federal Government.

Mr Cassegrain says the Cassegrain family has been a driving force behind the project but that economic conditions have seen the family withdraw direct financial support to concentrate on its own business enterprise. A land-holding given by the family to the project has now been placed in the hands of a community-based steering committee which is keen to see fruition of the project.

Mr Cassegrain's other interests have included being a member of the Interim Board of Governors of the University of New England during amalgamation, and a Director of the North Coast Institute of Sport in addition to other community activities.

Despite his heavy involvement in Mid-North Coast matters, Mr Cassegrain says the memories of university days never leave you.

"Professor Brian Johns was addressing a macro-economics class when he held up one of my essays and said in effect that there were only two or three words in the paper that were spelt correctly - the name and the topic." Mr Cassegrain said.

"The Professor said the logic sounded OK but that he needed a dictionary to interpret the spelling. "Despite my days at Newcastle, I'm still a hopeless speller."

As many of you will be aware, graduates of the University of Newcastle and other members of Convocation right now have a wonderful opportunity to reaffirm their links with their Alma Mater and, at the same time, help alleviate one of our University's most pressing problems - a desperate shortage of student accommodation.

Convocation, in association with Rotary District 967, has launched an appeal for $250,000 to build a common room and other accommodation at International House on the University's campus.

Any member of Convocation sending a donation, however small, will be making a welcome contribution to this very worthwhile cause.

Those donating $100 or more to the Appeal will have their names automatically recorded on a Convocation Roll of Honour to be permanently displayed in International House.

Donations of $2 or more are tax deductible.

The shortage of student accommodation for students at our University has never been more acute than it is right now.

As graduates, you will appreciate more than most people just how important a settled environment is for University students and you will realise the need for help is genuine.

I commend the Appeal to all of you.

I am happy to also report that Convocation's involvement in this year's graduation ceremonies has been the most successful in its history.

The two Graduation Balls staged by Convocation in the new wing of the Union attracted a total of more than 700 people and were a tremendous success.

They were the first graduation balls to be held at the University in more than 10 years and we on Standing Committee are delighted to have been able to re-establish a tradition which should continue for many years to come.

I will take this opportunity to publicly thank our Convocation Officer, Ms Margaret Wells, for the tremendous amount of work she did to ensure the success of both functions.

My thanks also go to the members of Standing Committee who helped with the Ball decorations and arrangements and who manned our mementos stand in the Union on the graduation days.

Sales of mementos were excellent and raised more than $3,000.

Convocation is also indebted to Mr John Broughton, Ms Kay Maddison and their staff at the Union for their great service and co-operation in the staging of the balls.

You will be happy to learn that the first Hong Kong branch of Convocation has now been officially formed at a meeting of our graduates over there. You will remember, that four of our graduates in Hong Kong, Mr Simon Lo, Ms Connie So, Ms Loren Lee and Mr Joseph Fung agreed when I saw them in December to form the Branch. I recently had a letter from the quartet telling me that the formation meeting has now been held.

Other important upcoming Convocation events for your diary include:

August 20 - Our Careers Fair in the Great Hall. Those graduates able to participate are asked to contact either Ms Wells or Careers Officer, Ms Helen Parker.

August 31 - Nominations close for the Newton-John Award and the Convocation Medal for Academic excellence.

September 7 & 8 - Open Day. Convocation will be organising a display of Academic Dress. Graduates able to assist by supplying appropriate material, are asked to contact Ms Margaret Wells at (049) 21 6464.

September 11 - The Newcastle Lecture by former leader of the Democrats, Ms Janine Haines.

October 11 to 13 - The annual meeting of the Australian University Graduates' Council at Wollongong University.

VIC LEVI
Warden of Convocation
OUR GRADUATES

PROFESSOR CLIFF HAWKINS

Cliff Hawkins, whose main claim to fame remains his heavy work in the Uni forward pack in the Tighes Hill days, has been appointed Deputy Vice-Chancellor of the University of New England and Principal of the Armidale campus.

Cliff's distinguished career as a Professor of Biological Sciences and in University administration - he was most recently Pro Vice-Chancellor at the University of Queensland - is understood to have carried a little weight UNE's selection.

Cliff's brother, Frank, still hangs around the Shortland campus but won't come to Rugby training, asserting that running around in the mud is not the done thing for the Deputy Academic Registrar.

Ms DEBORAH JONES

Deborah Jones (BA 1984) has been appointed Arts Editor of The Australian newspaper.

Deborah started her degree course while working as a journalist. She has also established her name as a critic and drama tutor. Since moving to Sydney, Deborah has held a number of positions on The Australian, most recently on the foreign desk.

She succeeds the renowned Maria Prerauer in the job of Arts Editor.

Mr PHILIP PAGE

Phillip Page is the architect in charge of designing Australia's pavilion at Expo 92 in Seville. It is not Phillip's first Expo involvement: he joined the Australian Construction Services team in 1975, working on the pavilion for Okinawa and has been part of the team working on Australia's buildings at Knoxville (1982), New Orleans (1984) and Vancouver (1986).

Seville is an important project. The Expo will be the first Universal Expo since Osaka in 1970, with 110 countries represented. And this time Phillip Page is in charge of a team of four architects plus support staff.

The Convocation's Annual Dinner in March was a great success when the two award winners flew in from overseas to accept recognition of their achievements.

Pictured are Dr Peter Ramadge with his Convocation Medal along with the Warden of Convocation, Mr Vic Levi, the Vice-Chancellor, Professor Keith Morgan, and the recipient of the Newton-John Award, Dr John Mathieson.

Dr Ramadge, who travelled from Princeton University in the United States, received the 1990 Convocation Medal for professional excellence. Dr Ramadge has an international reputation in the field of engineering and is recognised as being one of the most talented engineers to graduate from the University of Newcastle.

Dr Mathieson flew from Auckland to receive the Newton-John Award for innovation or creativity in any field by a graduate of the University. Dr Mathieson is well known as founder of the Newcastle Cycleways Movement, for his research into bicyclist trauma and for his research into modern bicycle helmet safety.

Dr Mathieson's award was a watercolour landscape (pictured) by Australian artist, David K. Taylor.
OBITUARY

Emeritus Professor Alexander Maclean Ritchie
June 12, 1913 to February 24, 1991

The recent death of Emeritus Professor Alec Ritchie, Foundation Professor of Philosophy, has taken from the University community one of its most committed and long-serving members. Alec was appointed as a Lecturer to the Newcastle University College in 1957, joining C.F. Presley and Sandy Anderson in the Philosophy Section of the Humanities Division. In 1958, after Presley resigned to go to Adelaide, Alec was made head of the Section and Senior Lecturer. He was promoted Associate Professor in 1965 and later that year he was appointed to the Chair in Philosophy.

In 1957, when Alec came to the College, the thought of Professor John Anderson of Sydney University was a strong force in the universities of New South Wales. This was particularly so in Newcastle where, from 1958 till 1966, all members of the Philosophy staff had taken their first degrees in Anderson's Department. Alec had gone up to Sydney University in 1930, after having been dux of Kempsey High School. He became deeply involved with Anderson's philosophy and the undergraduate activities that grew up around this radical professorial figure. It was the golden age of Andersonianism, and Alec with his wide range of intellectual interests and his abilities as an artist and sportsman was, according to one of his contemporaries, a striking undergraduate figure. Alec had a particular interest in Anderson's political views at the time. He would sometimes recall in conversation how, in the early thirties, he had accompanied Anderson, then strongly identified with Communist views, to a political meeting in Newcastle where Anderson had spoken forthrightly and honestly about his political convictions to the unionists present. The example of Anderson's character and thought was to remain a positive influence in Alec's understanding of the philosopher's task even though later experience and reflection led to new orientations and modifications of the philosophy he had learnt in Sydney.

After graduating in Arts, with majors in Philosophy and English, in 1934 and studies at Sydney Teachers' College, Alec followed his parents' profession and joined the Department of Education. He was to be with the Department from 1935 to 1950. In 1941 he was awarded a Master of Arts in English. He served with the AIF between 1943 and 1946. As part of his war service he had responsibility for organising Civil Education in Borneo, after the Japanese withdrawal, and he taught matriculation studies to returning soldiers for two years as part of the Commonwealth Rehabilitation Training Scheme.

After his army service Alec resumed his school teaching career, but his intellectual interests pulled him more and more in the direction of becoming a professional philosopher. At this time he did some part-time work in Anderson's department and in 1950 he was appointed a teaching fellow in A.K. Stout's department of moral and political philosophy. Later that year he went to London to pursue doctoral studies at Bedford College. He was awarded a PhD in 1956 for a thesis on The Philosophy of Substance and the Philosophy of Mind with Special Reference to Aristotle and Descartes and their Conceptions of Science.

While in London, Alec supported himself by teaching for the London County Council, but he fully involved himself in discussions at the various London colleges and at the Aristotelian Society. During this time he came to know and to impress some of the leading London philosophers - H.B. Acton, who supervised his thesis, J.N. Findlay, Ruth Saw, A.J. Ayer, C.E.M. Joad - and he taught courses at Bedford and at Birkbeck College.

Alec's experience of philosophy in England provided new directions and ways in which to develop his long-time interests in the history of philosophy and the philosophy of mind and human nature. He never lost his respect for Anderson's teachings but he became less interested in the imperatives of that system of philosophy and more concerned with the close study of the particularities of individual problems.

When Alec returned to Australia in 1957 it was to become a senior member in the very small group of philosophers at Tihges Hill. Whatever long-term research plans he had had upon completing his doctoral studies, he found that he was now committed to an extensive teaching and administrative round in a small but growing College and University.

Alec threw himself wholeheartedly into these tasks and the shared task of building up the University community. He willingly served on academic committees becoming, over time, both Sub-dean (1966) and Dean (1972-73) of the Faculty of Arts. He also played an extremely active role in the wider life of the community. He was executive member of the Staff Association in its early days and President in 1961 and a leading figure in the formation of the Arts Association. In the town he offered WEA lectures in Philosophy, a tradition maintained by departmental colleagues until recently. His contribution to the life of the student body is best seen in his active support of the establishment of the University Union of which he became the first President in 1961-62. His service to the Union was honoured by the naming of the Ritchie Room.

In the sporting life of the University, Alec is remembered as an extremely able golfer, a game which he had learnt to play well as a schoolboy in the country. His skill as a golfer was of great assistance to the staff teams which regularly played against the University of New England and the RAAF base at Williamtown. He was also a member of the small and often wryly commented upon group of golfers which used to play most Saturday mornings with Professor Auchmuty at Stockton. Like the other members of that Saturday morning group, Alec closely followed the fortunes of the University Rugby team. Alec's willingness to help make the University a centre of intellectual and social communities was aided by his naturally friendly manner and his obvious pleasure in the various aspects of academic life.

He was fortunate that Professor J.J. Auchmuty, the second Warden of the College and the first Vice-Chancellor of the University, shared a similar vision of what Newcastle could become and an unsentimental determination to realise that vision in action. Auchmuty was prepared to extend his considerable assistance to those who were prepared to work hard for a strong regional university with close ties to the older Australian universities and their traditions. Alec worked closely with James Auchmuty and greatly valued the strong bond of friendship between them.
HELPING OUR MOBILE CHILDREN

A pilot program which aims to assist the parents of "mobile" or "transient" children to become more involved in the educational process of their children is having immediate success thanks to a small team which is based at the University.

Known as "Homelink", the scheme works through a network of volunteers who are linked with a child referred by school staff or in response to a request by a family. The program is being piloted in two areas of the Lower Hunter - Western Lake Macquarie and Maitland/Cessnock - and will be assessed at the end of this year.

Homelink is an initiative of the Hunter Caravan Project which is based at the University. Sponsored by grants from the Bernard van Leer Foundation in The Netherlands, the caravan project aims to improve the lifestyle of young families who live permanently in caravan parks and has been operating since 1986.

Homelink itself is being funded jointly by the Disadvantaged Schools Program and the Ministry of Youth Affairs and it's hoped the scheme will provide a successful model for the effective use of volunteers in the NSW school system.

Co-ordinators for the program are Ms Linda Ireland (Western Lake Macquarie) and Ms Ruth Gresham (Maitland/Cessnock) who say the scheme is one of two supported by the caravan project, the other being "Homelink" which aims to assist in their own homes, young families who may be experiencing difficulties or frustrations because of financial, social or other reasons.

Homelink relies on a system of volunteers and Homelink is based on the same model, Ms Gresham said.

"Children whose families live in a 'mobile' situation often experience disadvantage in their education. 'Mobility' in this instance refers to situations where people move into a community and are isolated because of their lack of community knowledge and lack of a support network. Mobility can also refer to those people who lack security in the permanency of their accommodation which, for example, can be caravan populations, private rental market dwellers, refuge dwellers, migrants, defence forces families or those families living in public housing.

"We believe Homelink is an exciting initiative which can assist the parents of these mobile or transient children to become more involved in the educational process of their children," she said.

One of Ms Ireland's and Ms Gresham's first tasks is to prepare 10 volunteers through an eight-week training course. Individual volunteers, in association with the Co-ordinators, determine the most effective way in which to assist a child and the family with particular problems that have been identified.

Ms Ireland said that the Homestart experiment indicated that volunteers were generally extremely enthusiastic about the preparation course which offered opportunities to discuss important issues in a group situation.

"They also gain more self confidence and learn about themselves in relation to other people. The opportunity of working as a volunteer can be challenging and rewarding and often becomes a stepping stone to rejoining the work force," Ms Ireland explained.

"Another hope is that their parents, with the assistance of a trained volunteer, can work at home with the children more closely to their needs. This can also be a respite for parents who may need a break," Ms Ireland said.

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"They also gain more self confidence and learn about themselves in relation to other people. The opportunity of working as a volunteer can be challenging and rewarding and often becomes a stepping stone to rejoining the work force," Ms Ireland explained.

"Another hope is that their parents, with the assistance of a trained volunteer, can work at home with the children more closely to their needs. This can also be a respite for parents who may need a break," Ms Ireland said.

Co-ordinators for the program are Ms Linda Ireland (Western Lake Macquarie) and Ms Ruth Gresham (Maitland/Cessnock) who say the scheme is one of two supported by the caravan project, the other being "Homelink" which aims to assist in their own homes, young families who may be experiencing difficulties or frustrations because of financial, social or other reasons.

Homelink relies on a system of volunteers and Homelink is based on the same model, Ms Gresham said.

"Children whose families live in a 'mobile' situation often experience disadvantage in their education. 'Mobility' in this instance refers to situations where people move into a community and are isolated because of their lack of community knowledge and lack of a support network. Mobility can also refer to those people who lack security in the permanency of their accommodation which, for example, can be caravan populations, private rental market dwellers, refuge dwellers, migrants, defence forces families or those families living in public housing.

"We believe Homelink is an exciting initiative which can assist the parents of these mobile or transient children to become more involved in the educational process of their children," she said.

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The University is planning five new undergraduate opportunities for 1992, taking to more than 70 the number of courses available. "The new programs reflect changes occurring in society and the University's commitment to keeping pace with broad change," the Adviser for Prospective Studies, Ms Sandra Box, said. The proposed courses offer variation in some fields and completely new opportunities in others," she said. "We have already found great interest in the new programs at careers markets and from schools, and we expect strong competition for places, especially from this year's HSC students."

The proposed courses are:

Diploma in Aboriginal Studies

The former Hunter Institute of Higher Education introduced in 1988 an Associate Diploma of Administrative Studies (Aboriginal) in response to the particular needs of the Aboriginal community. Now being upgraded to a two-year full-time Diploma, the course is divided into two strands: administration, which includes legal, political and economic studies, and nutrition and health, which includes nutrition, food and studies in community recreation.

It is expected that most students will be selected under the University's special entry scheme for Aborigines, but general admission rules will apply for other candidates.

Bachelor of Building (External)

This course has been developed primarily for people who work in the building industry and who, because of their work commitments, are unable to study full-time on campus. It is a six-year program designed to prepare students for a professional career in either building or quantity surveying.

In each year, only one "subject" - Building - is studied. But four areas of study are grouped within that subject - economics and management, communication and computing skills, professional skills and technical skills - and each has to be applied to parallel areas of skill and knowledge within Building.

Bachelor of Education (Design and Technology)

This four-year full-time course will prepare students to teach in the Technological and Applied Studies area of the secondary school curriculum. It will also subsume the existing Bachelor of Education courses in Home Economics and Industrial Arts Technology.

While studies in design and technology form the core of the new course, options will be offered in design material technology, foods, textiles, consumer technology and engineering technology. Students may specialise in subjects associated with Home Economics or Industrial Arts Technology and Engineering Science.

Bachelor of Engineering (Environmental)

Environmental engineering is a response to the backlog of environmental problems created by the relatively unstrained development of our society. Some of these problems are the results of engineering, many arise from the historical development of society without knowledge or recognition of the relationship between human activity and the environment.

Society clearly expects that future projects should be planned in a way that minimises environmental damage, and this four-year full-time course is designed to provide Australia with engineers equipped to meet that challenge.

Bachelor of Nursing

The Bachelor degree in Nursing will prepare students for comprehensive professional nursing practice in a variety of health care settings. The core studies in nursing will be supported by studies in the biological and behavioural sciences.

The course has a strong emphasis on primary health care, encompassing the individual, the family and the wider community. Students will also receive experience in a range of clinical settings. With the co-operation of the Hunter Area Health Service and neighbouring services, students can undertake practice in community settings, country hospitals and major teaching hospitals.

A unique University course which has been offering mature-age people the opportunity to qualify for enrolment in a number of undergraduate degrees has spread its wings.

The Open Foundation Course has been popular with Newcastle people since it started in 1974 and is now being offered on the Mid-North Coast in addition to the Central Coast and the Upper Hunter.

The Mid-North Coast course started in March after negotiations last year between the University and the Hastings Tertiary Study Centre. Initial reaction to the course was so good that the class filled within a few weeks of it being advertised.

The Director of the Department of Community Programmes, Mr John Collins, said he was delighted with the success of the Mid-North Coast course and that a full class of 20 students had been attending lectures twice a week.

"There is a significant number of people in their early 20s enrolled in the course, many of whom have taken the opportunity of a second chance after not gaining sufficient marks in their HSC," Ms Barnes said.

"There is also a group of women who are taking advantage of the second chance after getting their children off to school, while some students are there for the intellectual stimulation..."

Mr John Collins said the Port Macquarie success follows a similar situation on the Central Coast where the number of places this year was increased from 60 to 150, the lectures now being conducted at the University's Central Coast Campus located at Ourimbah after various venues were used over the years. The course at all locations is offered on a part-time basis with lectures two nights a week, but an intensive full-time course has been available in Newcastle since 1986.

The course is designed to:
- enable the university to assess each student's ability to cope with studies at university level;
- allow mature age people to discover their own interest in and capacity for ongoing tertiary studies; and
- provide a thorough orientation to university methods and standards.

More than 600 people are enrolled in the 1991 adult matriculation program but there could be more in 1992. Discussions are already being held with the Taree Adult Education Association with the view to holding the course in Taree next year.
ONE HUNDRED ORGAN BROADCASTS

Each Sunday at 8 pm, the organist Michael Dudman gives a broadcast recital for 2NUR-FM. The first program was broadcast in early March, 1990, and program number 56 was broadcast just before Easter this year; but Michael Dudman works well ahead and, by then, had completed the recording of the 100th program in the series.

Performing for radio has been an important part of his professional life. He gave a public recital at the age of 14, appearing a year later as a soloist at the Sydney Town Hall. His first ABC broadcast, in a series called Young Australia, was undertaken at 17, and began an association with the ABC that has resulted in concerts, recordings and national and international broadcasts. These have contained many programs linked together in series, including Organs of the Hunter Valley, Series I, (1973), Organs of Western Australia (1975), Organs of the Hunter Valley, Series II (1978), Historic Organs of Sydney (1985), Historic Organs of Tasmania (1987), Great Organs of America, Series I (1986), and Great Organs of America, Series II (1990).

In 1980 he was soloist in the ABC's 50th Anniversary Concert from the Sydney Opera House, broadcast live to an estimated audience of eight million people throughout the world. For the 2NUR programs he plays most frequently on the Smeage organ in the University Conservatorium Concert Hall.

"It's a fine instrument, and the hall is permanently set up to record. The inaugural recital here was in August, 1988. Since that time the organ has been heard very frequently in broadcasts and recitals: we have a regular series throughout the year, there are the weekly 2NUR programs, and some national broadcasts as well."

However, he has introduced other organs to 2NUR listeners, including the Pogson organ in the Organ Studio at the University Conservatorium, the organ at Christ Church Cathedral, and some American instruments. In 1990, while in the United States, he recorded 16 programs on Historic New England Organs for 2NUR.

"They included the famous Walcker at the Methuen Memorial Music Hall, 19th century Hook instruments, and early 20th century organs by E.M. Skinner.

"It's always a joy to travel to new places and play new instruments. You may be unaware that the concert organist can encounter problems from which other instrumentalists are mostly spared. No two instruments are the same, and some are very different indeed in terms of tonal design, action, acoustic environment and console controls.

"One really needs to practice for at least two days on each instrument to feel comfortable, yet often the schedule allows for nothing like that.

"And then, of course, there are often unexpected problems. The recording equipment malfunctions, the hall is locked, or has been double-booked; extraneous noises (police sirens, trucks, people talking, aircraft, buzzing insects attracted to microphones, chirping birds): all these are hazards, predictable in retrospect, but never foreseen.

"But if there are problems, there are rewards too in working in splendid buildings on lovely instruments, and meeting with professional colleagues."
Video Punk Helps Back Care

This week Johnny Wonders, punk star of the University's new back care training film, Watch Your Back - Save Your Spine, was sentenced to one week's bed rest in pelvic traction.

Surprised by his doctor's decision, the 50-year-old anarchist sporting fluroescent blue stretchy pants and smeared tattoo on his forehead, was unwillingly admitted to the Orthopaedic Unit at Royal Newcastle Hospital, showing at the staff during the traction fitting procedure.

"No, I still don't understand this and I'm not going to be here if you try and make me," he said. "It's a simple matter of losing your job, isn't it? I mean it's all common sense to me. I'm telling you there's nothing to it. Leave me alone."

Nursing staff at the Orthopaedic Unit noted that this was the first time they had heard the patient forget that they were there for treatment. He had to be reminded of the traction procedure.

In the film, Watch Your Back - Save Your Spine, Johnny plays a punk (surprise) and ends up in minor trouble as he demonstrates the personal approach to on-the-job back care. The punk's attitude and his message have now placed him in hospital.

Unfortunately, Johnny's work alongside his film to help Occupational Health and Safety 31,000 workers injured on the job every year at a cost to the community of over $820 million since 1985, according to the WorkCover Authority of NSW, will be delayed at least until October 1990.

While most of the injuries occur because of soft tissue (muscle and ligament) stress and strain, long-term back abuse leads to permanent damage.

All this, of course, is easily preventable, and the film was not to teach the principles of appropriate back care. It is to illustrate what Johnny (as Steve) had committed through special exercises which we cannot keep but to bend our backs.

From his hospital bed, Johnny was asked to comment on the film. "It has made a huge difference in my back. I didn't think it would be as big as it is being fitted."

These training films are costing 30% of our time, but if you'll get behind this, you're not going to do it."

Don't worry about back pain. Take care of your back, it's only one you have."

The video was produced by the University's Medical Communications Unit and is being distributed by RUSRA, Educational Services Division, part of the University's commercial arm, located on campus.
Travel in a Learning Mode

The University of Newcastle Community Programmes Department conducts educational theme tours to various parts of the world. Each tour has a guide, an expert associated with The University of Newcastle, and also usually involves the services of local resource people.

Travel with us, and enjoy the company of other intelligent, lively companions who are genuinely interested in the tour theme.

We cater for educational tours from, to and inside Australia, using the services of fully accredited travel agents for transport and accommodation bookings.

For information on tours currently on offer, or to commence planning your group's next educational travel experience, please contact:

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