The Buses, Bikes, and Automobiles:
Callaghan's Transport Problems
Reshaping Australia
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A Shoestring Down Under
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TRAINS, BUSES, BIKES AND AUTOMOBILES

Following many requests for information, this edition of VGE looks at transport issues on the Callaghan campus. The University has a strategy which should soon begin to ease traffic congestion by enhancing alternative modes of transport.

In addition we talk to Dr Pam Robertson from Film Studies in the English Department and Professor Lois Bryson who has been working on the Reshaping Australian Institutions Project at the Australian National University. The winners of this year’s Teaching Excellence Awards are profiled and Emeritus Professor Mick Carter gives a retrospective on his time at the University.

At the time of going to print we had received no responses to our Fax Your Say column. We assume you’re all quite content out there...or asleep....or still looking for a parking space. The offer still stands.
CHOKING IN THE RUSH TO GET HERE

We like to call it a village but the University of Newcastle could be likened to a micro-city and, like cities around the world, it is in danger of choking on its own traffic congestion.

The symptoms of this growing problem can be seen on the faces of frustrated staff and students as they circle each morning searching, hoping for a parking space to appear. They can be seen on the faces of motorists not travelling to the University but stuck in the traffic jam which builds each morning around the western entrance. They can be seen on the scarred face of the revegetated bushland, crushed beneath the wheels of vehicles too late to get a legitimate parking space.

As the frustration builds, the question foremost in the minds of everyone associated with the University (or even just driving past) is how to address this issue.

The University does, however, have a strategy. The Transport Management Strategic Plan for the Callaghan campus has been in the process of development for two years and has involved consultations with the Roads and Traffic Authority, Newcastle Buses, Newcastle City Council, Newcastle University Students Association, the University Council and independent consultants. Its success depends on a number of important and integrated initiatives coming together.

HISTORY

Traffic congestion began to occur soon after amalgamation when two entirely separate entities had to function as one. Public transport was not working well at the time and the demand for parking spaces greatly exceeded supply.

The idea of a multi-storey car park to be paid for by parking fees was conceived but rejected by the University Council in December 1992. It was deemed unfair to introduce parking fees without providing alternatives for those who could not afford, or did not wish to pay.

The answer to the problem, it was argued, was not to provide more car parking spaces, but to establish alternatives which would encourage people to travel to the University by other means. More people arriving by bus, train, bicycle or on foot would mean less need for more parking spaces, or a multi-storey car park.

The process of exploring alternatives and setting up systems has been a long one and will continue for some time. But parts of the strategy are coming together and Mr Don Foster, Director of Estates and Services spoke to VGE about solving the University’s transport difficulties.

RAILWAY STATION

The campaign for a university railway station began in 1965 and was taken up in earnest by the student body in 1992. The announcement to build the station came early this year from the State Government and the first sod of soil has already been turned. It is hoped that the station will be operational by the beginning of 1996. The University Station will set students down behind the No3 Oval, a 14 to 18 minute walk, depending on fitness, to the Auchmuty Library.

The trains will bring students from the centre of Newcastle, as long as the railway line remains open to Newcastle Station, and also from the Lower Hunter via Maitland.

“Were not sure how many people who now drive cars will switch to train, or how many people now travelling by bus will switch to train,” Mr Foster said.

“However we are hopeful that the railway station will encourage some people to leave their cars at home. If it provides quicker and cheaper transport then that should be the case.”

THE OLD RINGROAD

The General Purpose Building is nearing completion and staff and students alike are wondering out loud when the old ring road will be reopened. A Ringroad Traffic Analysis commissioned in December last year revealed that the impact of closing that road had been significant.

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On a normal weekday 2756 vehicle trips were affected by the closure and an extra 273 extra metres were added to each vehicle journey. The report stated that 2756 vehicles travelling an extra 273 metres resulted in an additional 752 kilometres travelled on the campus each normal day.

However, the old ringroad is in need of major repairs and upgrading and Mr Foster explained that the cost of those repairs is high. In addition, he said, if the alternative transport initiatives are successful and fewer people bring their cars to the University, the negative effects of the closure should be reduced.

The University Council has been advised that the ringroad will remain closed until all the parts of the Transport Management Strategic Plan have been implemented and the actual need for such a road can be properly assessed.
THE NEW RINGROAD

A new ringroad connection is proposed as an alternative roadway linking the eastern and western side of the campus. This road would link the two main entrances via No2 and No6 car parks (see map on page 2-3) and would provide Newcastle Buses with the opportunity to bring commuters onto the campus.

The $2million needed for such a project has been included in the 1996-2000 Capital Fund Five Year Forward Projections and the Ringroad can be completed in 1996.

BUSES

Private buses already traverse the campus and many of them come direct from the Lower Hunter and terminate at the University. In other words they are buses operating specifically for the University. But at this stage Newcastle Buses (public buses) only travel along University Drive, dropping commuters near the western and eastern entrances to the campus.

"In recent years, time tabling and frequency of buses have improved. There are now some express buses to the University and there are now more routes which pass the University. We are major customers and Newcastle Buses has shown itself willing to work with the University," said Mr Foster.

However, the optimum situation would be for buses to actually come onto the campus.

The University has included in its strategy two major bus interchanges linked by the new ringroad through No2 and No6 carparks, which would enable Newcastle buses to bring students onto the site.

Those buses coming from the east, for instance, would enter the University at the present eastern entrance, travel via the new ringroad and link to the existing ringroad near the Computer Technology (CT) Building, then leave the campus via the western entrance.

One interchange would be located near the Design Building at the southern end of No6 carpark and the other near the CT Building. According to Mr Foster the interchanges would be well equipped with shelters, lighting, transport information, pedestrian connections, security and patrols.

The interchanges linked by a new ringroad will be constructed and usable from 1997, subject to funding approval.

CYCLEWAYS

The University has been working with other community groups and Newcastle City Council on the Newcastle Area Bicycle Plan in the hope that cycle access to the University can be improved.

The plan is under review at the moment and will go on public exhibition in June this year.

Mr Bob Henry, Senior Technical Officer with the Council's Traffic Engineering Division told VGE that the new plan will set achievable goals and be definite in its priorities.

At present there are adequate cycleways from the western, northern and southern regions of the city to the University but, according to Mr Foster, it is a dangerous activity to approach the University from the eastern regions of Newcastle by bike.

The proposed eastward cycleway would leave the University via Edwards Hall along the electricity commission casements and under the Maud Street overhang, along Prince Street in Waratah, then onto Turton Road to connect with the North-South Cycleway.

"Other initiatives to reduce traffic to and on campus may also make it more viable to have cars and cycles sharing roadways on and near the campus," said Mr Foster.

When, and if, more people cycle to the University as a result of better access, the University will provide the required bike racks, security measures and other facilities required by cyclists, he said.

CAR POOLING

The car pooling system operated by the Newcastle University Students Association is growing in popularity.

People offering transport are matched with people requiring transport on computer according to where they live.

The system is open to staff and students. Incentives to car pool are presently being installed: designated parking spaces for carpoolers in No2 and No6 carparks.

MULTI-STOREY CAR PARK

It will still be important for the University Council to consider a multi-storey car park for the future, according to Mr Foster. "Much of what is now sealed car parking will have to be targeted for buildings and open area recreational purposes as the University continues to expand," he said.

One proposed site for a low rise multi-storey car park is the area near the closed ringroad. The slope is considered suitable and the location is central to major teaching areas and the Shortland Union.

The viability of such a structure is presently under review but it is already known to be enormously expensive. The estimates are about $10,000 per car space.

And given that all the alternative modes of transport will have been promoted and catered for, it will then be feasible for the University to charge for the use of this and any other carparks for commuters who continue to opt for private vehicle transport.

The principle of user pays may further reduce the number of cars coming onto the campus and therefore enhance the strategy. "We may find that we actually need fewer car parking spaces," Mr Foster said.
TALKING ABOUT THE TALKIES

It is now 100 years since the first motion picture was made and during that period film has had an enormous impact on how we perceive the world. Yet, the study of film is a relatively new discipline. The Society for Cinema Studies, an international organisation of film scholars, comprises only 2000 members worldwide.

Subjects in Film Studies have been offered at this University for about 20 years, simply because the English Department’s Associate Professor David Boyd, a scholar in 18th century literature, developed a research interest in film and started teaching courses. However, Film Studies within the Department has taken great strides recently, with the appointment of Dr Pam Robertson, formerly of the University of Chicago, and the transfer of Ms Helen MacAllan from the Department of Communications and Arts Media. The strategic plan of the Faculty of Arts and Social Science states that Film Studies will become a full major in the Bachelor of Arts degree in 1996.

"To study film is to study the medium that has most changed our perception of the world."

The discipline’s credentials have been further enhanced by the awarding of the Society for Cinema Studies prize for Best Dissertation of the Year to Pam Robertson - an honour for Dr Robertson and for the Department.

The winning dissertation was on female camp in film and presented an historical look at female camp, from Mae West to Madonna. It will soon be published as a book entitled Guilty Pleasures: Women, Cinema and Camp. Dr Robertson spent three and a half years looking at films and archival material including fan magazines to complete the work.

"Camp is usually talked about as a gay male practice but many of the stars of camp are women and women also participate in camp as spectators. It is a style committed to artifice and exaggeration, especially in relation to gender roles and it has been recycled and revitalised again and again through the various periods," she explained.

Speaking with great enthusiasm for her work, Dr Robertson said that film studies is a lively and fresh field and there is still lots of work to be done. "There is a lot of terrific work on early cinema and people are digging up and discovering new things all the time. It feels very alive to me."

According to Dr Hugh Craig, head of the English Department, Film Studies has always been popular with students in English, for a variety of reasons.

"It has connections with language, with drama through performance and with English because of its interpretative interests.

"It has grown up in the Department of English perhaps because many of the skills necessary for the study of novels and poetry, such as character, narrative, imagery and symbolism are also necessary for the study of film."

Dr Robertson said there are always students who think that film classes will be easy and fun and enable them to watch lots of movies. They are very surprised when it is not as easy as they imagined, she said.

"But even after the first few weeks of the course students will say that they see visual culture differently. They find themselves watching movies and TV in a different way. They notice more about form and ideology, music and sound and they become more aware of the history behind these things.

"To study film is to study the medium that has most changed our perception of the world. It is an incredibly important medium ideologically because you can see the tensions and the contradictions that were going on at the time. You can learn a lot about a culture by watching that culture’s films, about what it means to be a person in that community at that moment in time.

"And apart from that, they are wonderful, wonderful entertainment. I wouldn’t want to live in a world without them."

VGE can verify that Dr Robertson correctly predicted that Forrest Gump would be the Oscar winner this year.

Dr Pam Robertson plays one of her old favourites, Busby Berkeley’s Gold Diggers of 1933.
EMERITUS PROFESSOR MICK CARTER
‘SHAKES DOWN’

It’s early days yet, but former Deputy Vice-Chancellor and now Emeritus Professor Michael Carter is getting used to retirement, in his own words, “shaking down”. Before his time at the University of Newcastle became but a faint memory, he agreed to speak with VGE about his academic and administrative career.

“Newcastle is entitled to a university which is among the top 12 in the country. It contributes much more to the national economy than it gets back and it deserves the quality of life that can come from the existence of a quality university. But, given the political structure and the fact that it is not in a capital city, the University faces a constant struggle to keep its position.”

And this is not the only struggle ahead, according to Professor Carter. “Newcastle must remain a recognised and recognisable university. This means endeavouring to ensure that academic criteria prevail over government and administrative interference.

“Problems of resources, bureaucratisation, increasing Government pressure and the direct powers of the Department of Employment Education and Training (DEET) foster an adversarial relationship in an institution which should be run in a spirit of collegiality and cooperation, rather than conflict,” he said.

The former Deputy Vice Chancellor argued, however, that academic freedom continues to prevail and that there is academic excellence, research achievement and good teaching across the University.

“If the test is scholarship, then the University of Newcastle passes with first class honours,” he said.

Professor Carter was Professor of Sociology at the University of Aberdeen when he answered the advertisement for the Foundation Chair of Sociology at the University of Newcastle in 1976.

“Those were interesting times. Professor George had succeeded Professor Auchmuty as Vice-Chancellor and the establishment of the medical faculty was being presided over by Professor David Maddison, who valued the socio-logical perspective.

“Some were skeptical about sociology and considered it a soft option but the department is now the best in Australia in my opinion, because of its size and range of interests as well as the quality of its staff and students,” he said.

After nine years as Deputy Chair of the Academic Senate, Professor Carter was appointed Deputy Vice Chancellor in 1988. This was the period of amalgamation and discussions on the issue were fraught and intense. “Here were two large components with different interests and ambitions. While there are residual problems, overall it has come together pretty well,” he said.

But what of the future?
Professor Lois Bryson, from the University's Department of Sociology, is presently involved in a bold new initiative which aims to reform Australia's social institutions.* The Reshaping Australian Institutions: Towards and Beyond 2001 Project is a gathering of the country's best minds, as well as some from overseas, and will examine everything from the Constitution and the economy to criminal justice and education.

To call this project ambitious is an understatement. The breadth of the scholarly endeavour and the depth at which issues will be examined will provide the country with a substantial body of theoretical and practical information which will shape policy into the next century.

Professor Bryson spent six months on secondment at the Australian National University's Institute of Advanced Studies last year working on the project and will continue to be involved until the year 2001.

The project's basic aim, she said, is to discover which aspects of Australian social life need changing and how to bring about that change.

"Most of my work with the project involves gender and sexual harassment. Adelaide academic, Carol Bacchi, has investigated how sexual harassment is dealt with in universities and I have looked at sexual harassment in the Australian Defence Force. We will compare where these two institutions are effective and ineffective in their handling of sexual harassment and work out some broader principles to help organisations attack the issues."

"This is one of the more practical aspects of the project. Many of the other scholars are philosophers and scholars of theory and they will look at how change is brought about in a theoretical way."

Professor Bryson has been working with the Australian Defence Forces on sexual harassment and equal employment opportunity for some time and she appeared on their behalf before the Senate Enquiry into Sexual Harassment in the Defence Forces.

Her work on the Reshaping Australia Institutions Project has also taken her to Finland for a comparative study of the relationship between paid and unpaid work and gender equality. She found that women shed some of the burden of responsibility for unpaid work (domestic labour) in both countries when they are in full time paid work.

"But Finnish women do far less unpaid work than Australian women though Australian and Finnish men do exactly the same amount. So Finnish women don't do less because their male partners do more. They do less because they have other social support systems, such as well developed child care policies, hot meals in the middle of the day at schools and work and time concessions for women with young children. "Finland has state policies that actually support women and create a more equal gender balance in the workforce. Finnish women are more likely to be in paid, full time employment than Australian women," she said.

There's no guarantee that the paper Professor Bryson and her associate Michael Bittman have submitted to the Office for the Status of Women will change policy in Australia. But it has added to the growing body of carefully researched information available to the policy makers.

"A concerted effort is being made to publish the ideas which come out of the Reshaping Australian Institutions Project and to make sure that government organisations hear about what's going on. There is a definite attempt to be policy-relevant," Professor Bryson said.

* Institutions in this context are sets of regulatory norms that give rise to patterns of action, concrete social structures or organisations. For instance, the Constitution is an institution that gives rise to patterns of action, such as intergovernment relations. Institutions of gender can be seen as gendered sets of regulatory norms that give rise to patterns of action, such as discrimination against women.
Enjoyment and commitment to teaching are concepts that should always be associated with education, according to Ms Carol Richards, a music educator in the Department of Curriculum and Teaching Studies. They are important ingredients for an enjoyable lesson, she said.

As a recipient of this year’s Excellence in Teaching Awards, Ms Richards attributes her success as a teacher to her love of the subject and her desire to be a good teacher. She is an expert in Orff Schulwerk, a method of teaching music, and travels the country giving lectures and in-service presentations to other music teachers. Later this year, she will be the keynote speaker at a State Orff conference and soon after will deliver a paper at the International Conference in Melbourne to mark the centenary of Orff Schulwerk.

"Commitment and enjoyment are important, in music and in any area of teaching. We all remember well the teachers who enjoyed their subject and imparted that to their students. It is important for education students to love what they’re doing and marry that with a confidence in their ability to fulfil their teaching responsibilities," she said.

This commitment is demonstrated when Ms Richards takes her second year Bachelor of Education (Music) students into the community for their practical teaching experience.

On Mondays at Jesmond High School, Ms Richards takes over from the regular music teacher, Ms Rose Bartley. She prepares these lessons in her own time and gets to know the pupils individually before bringing her own students into the classroom.

"It’s important for me to be in the classroom before my own students so that I’m aware of the high school pupils’ abilities and where they’re up to in their program," she said.

"But it really is a situation where everyone wins. I keep up my teaching credentials and keep in touch with what is happening in classrooms, the high school teacher gets fresh ideas and the stimulation of having a colleague in the classroom, the university students get practical experience and the high school pupils get a fresh teacher every week who has spent two weeks preparing an interesting lesson.”

After the Monday lesson, the university students attend a lecture on the Friday to discuss the theory of what they have learned in practice. By this time Ms Richards has watched the videoed lesson and is able to focus on particular problems.

“The students understand the theory much better and find it more interesting after they have encountered the issues in a practical way. They see the sense of it,” she explained. “And they are better prepared when they go into high school classrooms on their own in second semester.”

Ms Richards began her career in the United States. After emigrating to Australia, she taught in Melbourne High Schools for 11 years. Then, following intensive training in Orff Schulwerk at the Orff Institute in Salzberg, she made the move to tertiary education.

The founder of Orff Schulwerk (Schoolwork), Carl Orff, was a German composer in the 1920s. He collaborated with Gunild Keetman, a dancer, to open a school and train secondary students in music and movement. His approach to music education is known as elemental music and dance. The emphasis in the Orff approach is on the process of learning. Through guided exploration into the elements of music, the student discovers the nature of music and their own ability to create within this art form.

“The Orff approach aims to foster creativity and artistry in every child while learning skills of performance and composition. My aims as a teacher educator are to nurture the artistry in novice teachers while they learn their skills in planning, teaching and evaluating,” Ms Richards said.

“I try to encourage novice teachers to discover the nature of teaching through guided experiences and allow students to develop their skills and knowledge of teaching music in intrinsically satisfying ways.”

With some of the money from her award Ms Richards hopes to purchase instruments and equipment to be on permanent loan to Jesmond High School, for as long as the program continues. With any left overs she’ll attend to her own professional development, and enjoy it.
ANATOMY OF A LECTURER

When Professor Nik Bogduk finishes one of his anatomy lectures he is exhausted.

When I deliver a lecture, what I’m actually giving is a show, a performance. That’s not to say that it’s gratuitous. It’s not. It’s genuine. I’m trying to get inside the students’ brains, to capture their imaginations - but it is nevertheless a performance - just like a singer or actor up on stage - and it can be exhausting.”

Professor Bogduk from the Faculty of Medicine and Health Sciences, has just received one of the two Teaching Excellence Awards given by the University this year. The citation for the award says, in part, that he “has shown that it is possible to maintain excellence in both research and teaching...and that he has enlivened teaching in his discipline of anatomy.”

From the Professor’s perspective it is clear that he considers such attributes no more than the minimum requirement of the job.

“I am hostile to what I call the ‘two class system’, to the view put by some academics that research is everything and that teaching is beneath their dignity. I’m also equally hostile to staff with the converse view which holds that they are too busy teaching to bother themselves with research.”

“Dull teaching is where an expert gets up and recites dull facts. You can’t stand in a lecture theatre protected by a lecturn, an overhead and a laser pointer. You have to walk amongst the students, try to draw them in.”

Professor Bogduk has a variety of teaching techniques for grabbing an audience’s attention.

“My approach for a lecture of fourth year medical students may vary to the one I use for first year nursing students but the basis of whatever I do, is the performance,” he said.

“One of my most commonly used techniques is what I refer to as ‘gutterspeak’. I tell the students not to talk to me with academic jargon learned from the textbook the night before but to speak to me using real, everyday words. I want them to use common language to reflect their experience and to help train them in how to go about learning in a useful way.”

And contrary to what some experts would have us believe, Professor Bogduk does not subscribe to the view that you can learn how to be a truly effective teacher. He strongly believes that you either have it or you don’t. It is, he says, an intuitive thing. He does admit, however, that a great deal of what he does as a teacher is the product of what he observed himself as a student.

“A third of what I do is based on the inspiration I got from really good teachers. The other two thirds comes from avoiding everything the really bad ones did. I’ve had some really shocking teachers in my time but they taught me a lot about what not to do,” he said.

“...it’s a performance - like a singer or an actor up on the stage - and it can be exhausting.”
Multi-disciplinary research, a growing phenomenon in universities, proved the perfect means for Ms Monica Hurdal in her Master of Science degree. Using her expertise in mathematics and equipment in the Department of Psychology’s Human Brain Laboratory, Ms Hurdal was able to determine the exact location of where the brain processes visual information.

Because vision is the most developed sense in humans, it is often used in investigations of the human brain. The brain processes visual information in the primary visual cortex. After examining the functioning of this part of the brain, Ms Hurdal was able to locate the precise point in the brain where visual information is processed, using mathematical analysis.

She posed the question: Can the source of neural activity in the brain be located when a visual stimulus, such as a small bright light, is flashed in front of a person?

Using electronic equipment in The Human Brain Laboratory and supervised by Professor David Finlay, Ms Hurdal recorded small electric potentials (brain waves or EEGs) which were measured on the human scalp. The aim was to estimate the location of the neural source which could be creating the brain’s neural activity and which had been measured on the scalp readings. The procedure began with an initial estimate of the neural source and this was then repeatedly refined until it could be fitted to the observed scalp readings. She was supervised in this aspect of the work by Professor Sean McElwain.

Ms Hurdal then compared her estimates for the site of neural activity with the brain scans showing the anatomy of the brain. These scans were obtained using magnetic resonance imaging (MRI). The results confirmed that the initial processing of visual information in humans occurs in the calcarine fissure, a small cleft which runs through the primary cortex at the back of the brain.

Ms Hurdal also concluded that although scalp recordings for two people may be different, this can be explained by the differences in brain anatomy rather than the way in which these two people process information. For example, when two people see the same thing the same part of the calcarine fissure is being stimulated, but the fissure has a different orientation in the two people which explains the different scalp recordings.

The results demonstrate that anatomical differences in people can affect the location of a neural source.

“This research is fundamental to our understanding of how the human brain works and can be extended to other areas of brain function including hearing and touch,” she said. “Determining which region of the brain is involved in the initial processing of visual information has implications for further research, such as being able to assess impaired and non-impaired brain function non-invasively in a routine and systematic manner. This will ultimately lead to new medical and diagnostic tools in the future.”

Ms Hurdal’s work has been presented at several conferences and she is co-author of a paper which appeared in the Australian Journal of Psychology. She is now continuing her work as a PhD student in the School of Mathematics at Queensland University of Technology and is enthusiastic about the many applications of mathematics.

“Mathematics is an important tool which can be applied to many interesting problems in psychology, biology, medicine and many other areas. Applying mathematics to brain research is a fascinating area and is only one such example - there are countless others,” she said.
ENERGY SOURCES OF THE FUTURE

Around the world 12 trillion kilowatt hours of energy, in the form of electricity, are consumed every year, most of it supplied by coal-fired power stations. Our energy usage is exploding, according to Professor Gerard Ledwich, the new Pacific Power Chair of Power Engineering, and with the current concerns about the environmental impact of burning fossil fuels, the search for alternative ways in which to generate electricity has begun in earnest.

The shift from the predominant source, coal, to a different source would have little impact on the systems we use for distribution of solar electricity, he said, unless solar power becomes the preferred energy source of electricity generation.

Speaking at his inaugural lecture in March, Professor Ledwich said there would always be a mixture of energy sources. "We are looking toward different sources to fill particular niches."

He discussed the various sources available, including coal, gas and oil, nuclear, geothermal, hydro, wave and tidal power, paying particular attention to the use of solar energy.

"Solar cells are one way of getting the energy out of the sun. The energy coming from the sun is many, many times our current usage of energy. So overall you could say there is no energy problem, we just use the sun’s energy,” he said.

"At the moment solar cells are about 10 times the cost of the equivalent coal-fired power stations. But a unit based at the University of NSW has promised us a ten-fold cost reduction through the use of thin films and so the potential for the impact of solar cells is quite significant. But it is still limited to particular times of the day.

"If we found that a new hydro station or tidal station was our best solution, the nature of our power system would not change very much. Transmission towers would remain the same and as far as the customer is concerned, there would be no major impact. But it would make a difference if every household put in a significant amount of solar generation on the roof. In that case, there can be significant impacts on the nature of our power networks and the nature of the power delivery process.

"Sixty percent or more of the cost of almost all these renewables is the storage component. You might spend $10,000 on your solar cells for your roof and then have to spend another $30,000 to $40,000 to ensure that converts reliably into electricity when you need it.”

Professor Ledwich explored the options for power storage, including battery energy storage, which is costly, a pumped water mechanism, which is inefficient and super-conducting magnets, which have limits for the storage of large amounts of energy, but may become more attractive with further development.

"A distributed solar energy system, where customers had solar cells on their roofs, would be the best way of using the solar cell because you are dealing with small modules. There is no benefit to having a large array of modules together. You can distribute them out and still have the same efficiency of operation. Solar cells are the same efficiency in small sizes but batteries require high maintenance and if every customer had batteries and converters, there would be significant difficulties.

"An option that avoids the difficulties of the battery system or having a lot of space taken up by solar cells, is distributed generation but centralised storage. That way you could sell power, perhaps to Orion Energy, during the day and then buy it back at a slightly higher price at night. And the price difference would pay for an efficient means of easy storage during the day.”

If solar energy was to become the preferred energy source for electricity, the problems would lie with distribution, Professor Ledwich said.

"In this case we would need storage plants scattered throughout our cities and electrical engineers would have a very interesting time designing structures for efficient battery storage plants and reliable energy conversion, so that every customer could utilise solar cells.”

Professor Ledwich said the future was uncertain but there was growing pressure on the nature of power generation. While coal as a power source would last for several hundred years, proposals such as a carbon tax, and the decreasing cost of renewable forms of energy may force a technological change sooner than necessity dictated, he said.
UNIVERSITY WINS MAJOR WOMEN'S HEALTH STUDY

A research team from the University of Newcastle has been commissioned to lead a $3.5 million long-term study into women’s health - the first of its kind in the world.

The central research team for the project will comprise Professor Lois Bryson, Professor Annette Dobson, Dr Margot Schofield and Dr Julie Byles from the University of Newcastle and Professor Lenore Manderson and Dr Gail Williams from the University of Queensland. The project will also utilise the skills of many other researchers.

Professor Dobson said the team will study a group of 60,000 women and the project is designed to be continued for up to 30 years. The initial group of women will be drawn from three age groups (18-22 years, 45-49 years and 70-74 years) who will come from all walks of life across both urban and regional Australia.

"Studies will also be made of groups of Aboriginal and Torres Strait Islander women and women newly arrived in Australia with non-English speaking backgrounds," she said.

"We will explore social, economic and environmental factors as well as the physical and psychological factors that influence women’s health and well-being and we will examine how women’s health is affected by what they do - the numerous functions they take on, their lifestyle choices and the key events in their lives," she said.

Data will be collected on information relevant to quality of life, depression, acute and chronic medical conditions, health behaviours, availability and access to health services, satisfaction with health services, life aspirations and social and psychological indicators.

During 1995 the main group of participants will be recruited and a survey will be conducted by mail. This survey will be used to determine the prevalence of a range of social and health indicators and associations in the group. It will also be used to identify women for substudies, for example on violence, eating disorders and pregnancy.

Then, in 1997, the first of many follow up studies will be conducted to determine the short term predictors of quality of life, physical and mental health and health care utilisation for the three age groups. Predictors of pregnancy outcomes will be examined among the younger age group, menopause outcomes among the middle aged group and independence and death outcomes among the older group.

The project was chosen from 27 submissions by a panel of national and international experts on women’s health research. Professor Ron MacDonald, Pro Vice Chancellor (Research and Information Technology) said the awarding of the study to Newcastle was recognition of the University’s tremendous research capability.

“This $3.5 million project is in addition to the very positive research funding results for the last 12 months which saw approximately $8.3 million obtained in national competitive (government) grants, $1.6 million in other government grants, approximately $3 million in private sector contributions, and the awarding of the cooperative research centre for black coal research valued at about $5 million. All these projects are a tribute to the efforts of research staff at the University of Newcastle,” he said.

WORRIED MILK DRINKING MEN WANTED

Worried about your cholesterol levels? Do you drink milk? Are you male? Are you prepared to allow University researchers to measure your blood cholesterol levels?

If the answer is yes four times then you may consider volunteering for a research project being conducted in the Discipline of Nutrition and Dietetics.

The project is studying the way in which the body handles vegetable protein in the form of a soy drink. The researchers hope to learn more about the way soy protein in the diet can lower blood cholesterol, one of the factors in reducing heart disease.

Volunteers will be asked to use one of two types of milk (soy milk or cow’s milk) every day for 18 weeks. After the first six weeks they will be asked to switch to the other type of milk for a further 12 weeks. Then they will continue with that milk whilst eating a high fibre breakfast cereal.

Total milk consumption will be one litre per day. Milk and cereal will be provided.

A small blood sample will be taken on eight occasions during the 18 week period and volunteers will be asked questions about what they normally eat.

Volunteers should ring Alison Bencke on 21 5644.
NEW DEANS FACE NEW CHALLENGES

The University has two new Deans: Associate Professor Robert Constable is now Dean of the Faculty of Music and Professor Margaret McMillan is well and truly on deck as Dean of the Faculty of Nursing.

Professor Constable has long been associated with the University and has already been responsible for many of the major developments within the Conservatorium and the Faculty of Music.

In 1984 he successfully applied for the Deputy Directorship of the Newcastle Conservatorium of Music after 10 years teaching musicology at the Sydney Con. When the Newcastle Conservatorium became part of the University in 1989, he was appointed Deputy Dean, assisting the late Professor Michael Dudman.

He enjoyed the period of Professor Dudman’s deanship but naturally developed many of his own ideas, which he is now able to implement. Among these ideas are plans to diversify and make music qualifications more relevant to the present job market.

“Music education around the world has followed very traditional lines despite the fact that in the last 10 years the job market for music graduates has changed dramatically. We haven’t yet come to grips with that.

“Arts administration is now a big employer and students need a good grounding in legal aspects of music and human resource management. Music technology has gone ahead in leaps and bounds and has become a part of serious music. It is sheer folly not to embrace these changes,” he said.

Many devotees have already noticed the new items creeping into the Conservatorium’s concert program. This month the Australian Art Orchestra, a national jazz band, performed in the Concert Hall. Other surprises are planned throughout the year.

“The reaction has been very positive, particularly from students. I believe it is our business to get involved with the industry as it stands today, provided that traditional components and values of our courses are maintained.”

The Discipline of Nursing too has undergone tremendous change in the last 10 years. Professor McMillan is well known for her commitment to the development of nursing in the tertiary sector as well as developing strong links between the health and education sectors.

She has been involved in the development of scholarship as an academic administrator and a leader in the tertiary sector since 1983 at the University of Western Sydney (Macarthur) and previously at the Mitchell College of Advanced Education.

“I am committed to developing strong links between the health and higher education sectors,” she said.

“Since nurse education joined the tertiary sector, it has become apparent that members of the profession need to demonstrate to their fellow academics that they possess particular abilities, not readily attributed to nurses. In recent times nurses have become better at ‘selling themselves’ and I have been involved in developing courses and other promotional activities as well as attracting consultancy and research funds.

Professor McMillan’s research interests focus on teaching and learning strategies appropriate to nursing, and evaluation of clinical practice experiences and education. She is presently leading a team which is reviewing the Australian Nursing Council’s competency standards.

LETTER TO THE EDITOR

To the Editor,

The cover of the latest edition of Van Gogh’s Ear moved me to mirth at first casual glance. The bold letters VGE over a picture of frolicking students gave me a first impression of the magazine as non-serious. Were those people “Vegging out”? VGE suggests vegetable or vegetate which means “live an uneventful or monotonous life”. This is the antithesis of university life as I understand it to be.

When staff and students refer to this magazine it would be better to hear it called “The Ear” rather than “The Vegie”.

Please consider a logo change.

Irene Blyth.
Charlestown.

We settled on VGE because of the negative feelings towards Van Gogh’s Ear and because abandoning the name after only two years seemed premature. We intended each of the three letters to be read separately rather than as the word “Vegie”.

Editor.
THE UNIVERSITY ‘IN PRINT’

“The University of Newcastle in Print” otherwise known as the “In Print Series”, has been steadily gathering momentum since it was introduced last year. The program established by the Vice-Chancellor seeks to recognise and officially launch books written by members of academic staff.

After a successful program last year, this year’s series has already seen two launches. The first was Law for Aviators written by Professor Warren Pengilley and Mr John McPhee from the Faculty of Law, and the second was Computers in Psychology: A Student Guide written by Dr Stephen Provost from the Department of Psychology.

The book launches provide an opportunity for authors to present their publications to their academic colleagues and the community generally.

Professor Pengilley’s and Mr McPhee’s book, launched by Air Vice-Marshall Chief Justice Alastair Nicholson during February, has been hailed as a contemporary account of legal issues in aviation, containing an element of humanity, pathos and humour that make it eminently readable and easily understood. With air safety in the news as the moment, Air Vice-Marshall Nicholson, said the book was timely and related to lawyers and non-lawyers alike.

“It is one of the few legal treatises I have read that actually provides a degree of enjoyment to the reader. The authors have managed to give a very useful outline of the system of law as it operates in Australia, which would be of use to any lay person, whether they are aviators or not,” he said.

Dr Provost’s book was launched by Professor Kevin McConkey, Head of the Department of Psychology at the University of New South Wales.

“Computers in Psychology: A Student Guide written by Dr Stephen Provost from the Department of Psychology.

The book launches provide an opportunity for authors to present their publications to their academic colleagues and the community generally.

Professor McConkey praised Dr Provost for his commitment to the teaching of students and commented that the book has been written for the people who will read it, namely psychology students. He said that apart from containing a wealth of straightforward and useful information the book is “downright engaging and entertaining”.

Introducing the series, Professor Mortley said the book launches had become an important ritual. He said it was essential to recognise research and the effort involved in writing and publishing.

“Writing a book is a lonely pursuit, wearying and galling to the soul and could be likened to the loneliness of the long distance runner. The University is proud to acknowledge the efforts involved by hosting the In Print book launch series,” he said.

IMPETRATIVES IN MEDICAL EDUCATION: BEYOND PROBLEM BASED LEARNING

The 1990s are an exciting time for medical education both nationally and overseas. At least three other Australian medical schools apart from Newcastle’s are committed to significant changes in their programs. These changes include policies about admission and the introduction of problem based learning. The University of Newcastle’s Faculty of Medicine and Health Sciences is well placed to provide support in these areas because of its extensive experience.

The faculty is running a conference on medical education from May 28-31. The focus will be on practical aspects of implementation and maintenance of a problem based, integrated curriculum. Other issues in medical education, such as quality assurance, information management and the continuing professional development of graduates will also be considered.

A major feature of the conference will be active student participation. Students will be running symposia, helping train tutors and providing a perspective on medical education, rarely discussed at such conferences. Practical assistance will also be provided to all those involved in curriculum development and evaluation.

Mr Charles Engel, the Foundation Head of the Discipline of Medical Education, is returning to Newcastle as the main guest speaker.
SOLVING THE SEEMINGLY UNSOLVABLE

A student initiative in the Department of Mathematics has enjoyed three years of success and is set to expand. The Maths Clinic, started by Ms May Nilson when she was an undergraduate student in the department, has helped countless numbers of maths students through their first year of study and given second year students the satisfaction of lending a helping hand.

The clinics are held twice a week for one hour and are run by volunteer second year students. Anyone with a problem in first year Maths may wander in during the hour and receive assistance from one of five volunteer tutors.

The special thing about these tutors, according to Ms Nilson, is their closeness to the subject and their familiarity with the work. "The tutors are second year students who received Distinctions or High Distinctions in first year maths. It's all still fresh in their minds because they have just completed it with good results," Ms Nilson explained.

Paul Murphy is actually a fourth year student but he still helps out at the Maths Clinic. He is studying for a combined degree in Maths and Computer Science and responded to a letter of invitation from Ms Nilson. He enjoys helping other students but he has also gained a new perspective on teaching.

"It's actually quite a hard thing to do, to explain a concept to someone else. I have a better understanding of what is involved in teaching.

Wolfgang Suchanaw is in the first year of his Bachelor of Surveying and is finding the maths difficult. He said he finds it easier to attend the Maths Clinic than ask staff tutors or lecturers for help. "The setup is really convenient and the helpers are great, they know the work and can explain it well."

Ms Nilson, now doing her PhD in pure mathematics started the clinic after reading about a similar program at an American university. "I thought 'someone should do that here' and decided it should be me. I asked Professor Ian Raeburn who agreed to support the clinic with access to photocopying and a room, and it's all grown from there."

About 30 percent of the students who come to the clinic are regulars and the rest might come once or twice. They sometimes stay for the whole hour or they ask the question they want and then leave - it's up to them, Ms Nilson said.

The clinic now publishes solutions to past exams and quizzes (for a small fee, of course). An evening clinic for part time students is planned and Ms Nilson is looking for a permanent space. "We have plenty of tutors and if we had a permanent room we could extend the number and length of the clinics," she said.

And everyone wins - students, volunteer tutors and academic staff members who are able to give better grades and deal with fewer panicking students!

CONVOCATION PRIZES AWARDED

Convocation offers five prizes annually to students who have completed their first year of study. First introduced in 1992, the prizes were endowed by Convocation to offer undergraduates assistance in their studies. Traditionally, students have had little contact with the graduate body before their graduation and the Committee decided that more involvement be sought by Convocation.

The winning students are nominated by the Dean of the faculty for outstanding academic achievement or for their contribution to the faculty. They receive $100 and a certificate.

The Newton John Medal is for Medicine and German were the Generalist at Convocation in 1995 and are named after educators.Sberger and Professor Newton John. A former student at the University, Professor Sberger now teaches at the University of British Columbia. He was given a prize in recognition of his contributions to the University and his dedication to teaching.

The 1995 winners were

Samantha Smith - Newton John Memorial Prize in Music
Sarah Brown - Newton John Memorial Prize in German

The Faculty Prizes were awarded to:

- College of Education: Professor Elizabeth Smith
- College of Social Work: Professor Michael Taylor
- College of Health: Professor John Brown
- College of Law: Professor Jane Green
- College of Science: Professor Peter Brown
- College of Business: Professor John Smith
WOMEN WIN IN WATER

The University of Newcastle Women’s Water Polo team dominated competition at the Eastern Conference Games held at the University of Western Sydney’s Hawkesbury campus last month. The team had to rank in the top five in the State to qualify for the Australian University Games to be held in Darwin later this year.

In 1994 the Newcastle team won the silver medal and in 1993 the gold in Brisbane.

During the two day competition, the Women’s Water Polo Team played five games, winning them all and having only six goals scored against them. An outstanding result according to Recreation Officer Kylie McLean. “They played the University of Technology Sydney in the final, winning 6-2 and old rivals, Sydney University in the semi finals, winning 3-2. It was an extremely good result for the team.”

Five of this year’s team were also selected in the State Women’s Water Polo Team: Roslyn Eyers (Captain), Amanda Osmond, Nikki Searle, Megan Cross, Tammy Bayley, and Alicia Collins will all play for the NSW Universities Team if and when a competition is held. The team’s other two worthy players were Melissa Denis and Rebecca Tarrant.

The Eastern Conference Games includes teams from universities throughout NSW and ACT. Newcastle teams must finish in the top five at Eastern Conference championships in order to qualify for entry into the Australian University Games, Ms McLean said.

“This system means that the top 16 teams from universities are eligible to compete for the national title, although not all sports have pre-qualification through the conference system.”

The Australian University Games are expected to be the largest sporting event ever held in the Northern Territory. From September 24-30 Darwin will be swarming with approximately 5000 university athletes vying for titles in a total of 23 sports.

Are there any budding inventors out there?

The University of Newcastle Research Associates (TUNRA) Limited is sponsoring another INVENTORS DAY

Free Consultation

with TUNRA’s patent attorney

John Foster of Griffith Hack & Co.

Phone Pauline on 7172 or 7173 for an appointment.

The success of the Cultural Awakenings Festival depends on every person at the University so take this opportunity to be part of an event that could change your life!