January | February 2005

La Trobe
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Bulletin

Secrets of our Ice Age hunters

Top award for uni teaching

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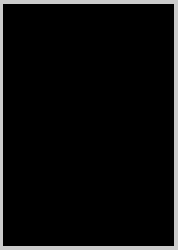

Animal bones excavated from Tasmania's Kutikina Cave on the Franklin River are being examined to throw new light on Ice Age hunters, see page 7.

The La Trobe Bulletin is published ten times a year by the Public Affairs Office, La Trobe University.

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Articles: Noel Carrick, Ernest Raetz
Photos: La Trobe University DPI,
Design: Campus Graphics, 62096
La Trobe University.

Printed by Work & Turner.

Website: www.latrobe.edu.au/bulletin

Malcolm Rimmer TO HEAD School of Business

Leading Australian educator, researcher and writer in the fields of management, industrial relations and human resources, Malcolm Rimmer, has been appointed Professor and Head, School of Business, at La Trobe University.

Professor Rimmer, also well-known as a commentator in Australian business media, is the former Professor of Human Resource Management at Deakin University.

His research interests include high performance work teams, trade union power, industrial relations reform and historical aspects of industrial relations.

He has published eight books, one as sole author, three major research monographs and numerous research reports, book chapters and refereed journal articles.

Professor Rimmer has been involved in executive development programs for more than 20 years, and has substantial experience in distance education and senior academic administration.

A Bachelor of Arts graduate from Oxford University with a MA from Warwick University, UK, Professor Rimmer is a Fellow of the Academy of Social Sciences of Australia. He was awarded a Centenary Medal in 2003 in recognition of his distinguished academic career.

From 1996 until 2002 he was Head of the Bowater School of Management and Marketing at Deakin University. Prior to that, from 1990 at Monash University, he served as Professor and Director of the National Key Centre in Industrial Relations.

From 1983 he was at the Australian Graduate School of Management, University of New South Wales, following ten years in the Department of Industrial Relations at Sydney University.

Ms Kosky and Mr De Pieri launching the new course.

Master of Wine & Wine Appreciation course launched

La Trobe University is offering a new Master of Wine and Wine Appreciation course. Launched by State Education and Training Minister, Lynne Kosky, during a ceremony at the Hotel Windsor in Melbourne, the unique program provides high-level educational links across the wine, food, hospitality and literary sectors.

Course organiser, Mr Lindsay Corby, says the venture has been supported by Victorian wine and hospitality industry professionals keen to see Melbourne develop as the 'keeper of knowledge' in these industries, thereby capitalising on, and adding value to, their competitive edge. He says the main aim of the course is to provide comprehensive knowledge of wine, its characteristics spanning traditional and new-world areas, and an appreciation of the culture, history and use of wine.

It has been designed for professionals in wine marketing, hospitality and tourism, wine business management or independent consultancy, as well as those with regular involvement and a keen interest in wine consumption and presentation.

Mr Corby says the course advisory committee comprises members of the Australian wine industry, including Mildura's Stefano De Pieri – who is also a member of the La Trobe University Council and Chair of its Mildura Regional Advisory Board.

The course has three levels: Graduate Certificate, Graduate Diploma and Master Degree, offered part-time over three years with class times outside normal working hours.

Top teaching award for Eleanor Wertheim

LA TROBE UNIVERSITY psychologist, Dr Eleanor Wertheim, has won the latest 'Australian Award for University Teaching' in the Biological Sciences, Health and Related Studies category.

She was one of six national Teaching Award winners announced by Federal Education Minister, Dr Brendan Nelson.

'I congratulate those academics and institutions recognised for their commitment to excellence in university teaching,' Dr Nelson said.

The awards, valued at $40,000 each, celebrate those who have 'demonstrated the highest levels of dedication, professionalism and enthusiasm for their efforts on behalf of their students'. They also aim to raise the status of university teaching.

Education Minister Nelson congratulates Dr Wertheim at the awards ceremony.

Dr Wertheim, an Associate Professor in the School of Psychological Science, is a Fellow of the Australian Psychological Society who specialises in clinical, health and peace psychology. She is a pioneering member of Psychologists for the Promotion of World Peace.

Dr Wertheim teaches and co-ordinates professional psychology courses and postgraduate coursework programs. She also teaches negotiation skills to law and legal studies students. With a PhD in clinical psychology from the University of Connecticut, she joined La Trobe in 1982. Her teaching is informed by internationally-recognised research leadership in two fields.

The first is conflict resolution, including factors that lead to forgiveness and reconciliation. She has lectured UN staff and diplomats from around the world on preventive diplomacy and peace making. She is also a key figure in an ambitious two-year project to support Victorian primary school teachers in enhancing relationships in their schools and teaching children to handle conflict constructively.

Peace-making, Dr Wertheim says, starts in the playground. This project helps children to learn how to meet their own needs while considering the needs of others around them.

The second is research into eating disorders and concerns about body image, especially among adolescents and women suffering from conditions like bulimia. She has developed programs designed to prevent these disorders.

Dr Wertheim also won the 2004 Australian Psychological Society Directorate of Science Excellence in Teaching Award. A colleague, Adjunct Professor Ross Day, also received an award from the Society, for his extensive contribution to Australian psychology.

Perfect night for **Opera in the Alps**

A perfect night, wonderful setting, capacity crowd, beautiful music – and $4,000 raised for the tsunami appeal.

These ingredients ensured the success of 'Opera in the Alps' held in the grounds of La Trobe University, Beechworth on 22 January.

'You could not have had a more perfect combination to ensure a memorable event,' said Beechworth campus Director, Ian Burke.

A crowd of more than 4,000 heard opera classics and popular songs from diva Marina Prior, tenor David Hobson and young performer, Jacob Cunningham.

They were backed by a youth orchestra conducted by Tommy Tycho and a 90-voice choir.

Staged by Autralian Music Events, Opera in the Alps is held annually at La Trobe's Beechworth campus. The event began nine years ago when 150 people attended the inaugural performance at Mt Buffalo Chalet.

Marina Prior performing on the Beechworth campus. ***Photo: Rob Lacey***

New approach to **children's** health care

In December, Premier Steve Bracks announced the appointment of Victoria's first ever Minister for Children.

The announcement came after the State Government had commissioned La Trobe University's Health Management Group to prepare a report entitled *A Review of Victorian Paediatric Services*.

This was one of a number of studies the Government commissioned to coordinate and integrate services to give children the best possible start in life.

'The appointment of such a minister was totally consistent with the recommendations we made in the review advocating more coordination and a whole of government approach to child health,' says one of its principal authors, La Trobe senior lecturer in Health Services Management, Dr Sandra Leggat.

Children are given the best start in life by a focused, coordinated approach to service planning and delivery.

The Cluster Leader for La Trobe University Health Services Management, Associate Professor Judith Dwyer, Dr Tony Cull, who since publication of the review has become executive director of the Royal Children's Hospital, and Dr Leggat prepared the review for the Department of Human Services.

Its purpose was to provide information on which the Metropolitan Health Strategy and the Victorian Rural Human Service Strategy could be based. Dr Leggat said that the most important finding in the review was the lack of a co-ordinated system for child health in Victoria.

'We found that Victoria is far behind other States in thinking about child health and for this reason we recommended that the Government adopt a total child health focus,' Dr Leggat said.

The review found that Victoria had a range of appropriate, quality services for children and adolescents, particularly in acute hospital and community-based early childhood services. But it pointed out that there were major gaps in service coordination, rehabilitation and chronic care services for children and adolescents.

'Victoria has a rather old fashioned outlook on child health in that it spends resources looking for people who may have problems rather than developing coordinated services covering the whole spectrum of child health. This results in many gaps in our health service system for children,' Dr Leggat said.

'There is limited focus on community paediatrics. This gap appears to have limited the ability of the system to develop coordinated services to respond to the kinds of illnesses now more prevalent.

'Although we have known about the "new morbidity" in child health for many years, with a change from infectious diseases to conditions more associated with early childhood and lifestyle, our system has been slow to respond. This is because our system is hospital rather than community based,' Dr Leggat said.

In one of its major criticisms, the review said that in the acute sector, service development was focused on inpatient beds. Today child health required refocusing on outpatient and ambulatory services and a broad capacity in paediatrics.

It appears these funding constraints have limited the development of a comprehensive package of care for children and adolescents throughout Victoria.

Another major problem discussed in the report is the transition from adolescent to adult services. For example there are 21-year-old patients with chronic diseases still being treated at the Royal Children's Hospital. 'The system needs to ensure transition is available when required,' it said.

Another is the lack of differentiation in emergency care between adults and children. Emergency departments of major hospitals have staff and facilities often unsuitable for the needs of children.

The review found that many children's health services were fragmented and uncoordinated, suggesting lack of planning and service integration needed for a responsive child care health system.

It also pointed to a significant shortage of paediatric-trained allied health practitioners and a possible future shortage of paediatricians and nurses specialised in paediatrics.

The authors of the review applauded the appointment of Sherryl Garbutt as the new Minister for Children, with an Office for Children to be established in the Department of Human Services.

They say the evidence has been clear, that children are given the best start in life through a focused, coordinated approach to service planning and delivery.

External surveys confirm La Trobe research strength

Recent external evidence has certified the prestigious standing of La Trobe University in the international arena.


Professor Osborne

'Naturally, this is very pleasing,' the Vice-Chancellor, Professor Michael Osborne said, 'but what is of particular significance is the high ranking of La Trobe as a research-based university'.

The Times Higher Education 'Top 200' survey in the UK which ranked La Trobe at 142 in the world generally, accorded the University fifth position in Australia on the critical criterion of research citation indices.

Complementing this information Professor Osborne noted that in 'The Swiss Centre for Science and Applied Technology Studies' survey (reported in the *AFR* 4-5/12/2004) La Trobe was ranked seventh in Australia.

'This high position in the Swiss survey ranking was very much research-related. For a relatively new University without a medical faculty this is a remarkable result and will, I hope, act as a stimulus to all at La Trobe to strive for still greater success on the research front in the coming year.' Four independent rankings of universities were published last year and in all of these La Trobe figures prominently.

Professor Osborne said: 'Whatever the imperfections of such "league tables" – and there are many – they do represent an important measure of peer evaluation. It is thus very pleasing that La Trobe University has figured so strongly in all four of these rankings.'

The other two surveys were:

The Shanghai Jiao Tong (People's Republic of China) 'Top 500' in which La Trobe was ranked 12 in Australia, and the Melbourne Institute of Applied Economic and Social Research ranking of Australian universities, where La Trobe came in at 9 or 10, depending upon which table is selected.

'It is also pleasing to report,' Professor Osborne concluded, 'that of the Innovative Research Universities - Australian Group (IRU-A), comprising La Trobe, Macquarie, Newcastle, Flinders, Griffith, and Murdoch universities, all figured strongly in the various rankings.'

Increased opportunities for regional students

IN THE FIRST of a number of important initiatives to strengthen its regional mission, La Trobe University has announced the finalisation of a plan to align academic programs across all campuses of the University.

In announcing the decision, the Vice-Chancellor, Professor Michael Osborne, said the alignment process had been a complex exercise and he highlighted the positive contribution made by all sectors of the University.

He drew attention to two significant features of the alignment process – firstly, the creation of a new Faculty of Education, to have its headquarters at the Bendigo campus; and secondly the consolidation of the University as a single institution embracing five multi-campus Faculties.

Professor Osborne said that it was vital for students at regional campuses to have access to academic programs on a par with those at the metropolitan campus and that a series of multi-campus Faculties seemed to be the best vehicle for such an aspiration.

'In this context it is highly significant that La Trobe University is the only regional university to be ranked amongst the most prestigious universities of the world in all three recent international reviews.'

In the review of research-based universities by the Swiss Centre for Science and Technology Studies, La Trobe University was ranked seventh in Australia.

Renewed commitment to Shepparton

La Trobe University has renewed its commitment to its Shepparton campus.

Deputy Vice-Chancellor, Professor Graham McDowell, said the University plans to relocate its administration centre and academic staff to new premises. He expects teaching areas to be re-located when new facilities become available in the next two to three years. The changes, he said, will help the University deliver new courses, such as a planned expansion of the Bachelor of Business and recent changes in the delivery of psychology.

Professor McDowell said La Trobe is working with all levels of government to find the best long-term solution for its higher education needs in Shepparton. He also welcomed the Federal Government's recent commitment of $1.5 million towards this cause.

Personal Chair
for insect conservationist

Dr Timothy New, a global pioneer of insect conservation, has been appointed to a personal chair as Professor of Zoology in the School of Life Sciences. Formerly Reader and Associate Professor at the University, he joined La Trobe in 1970.

Insect conservation is a critical discipline often overlooked due to a focus on higher animals. Professor New has written more than 360 research papers and over 20 books on entomological and conservation topics, including *Insect Conservation: an Australian Perspective* published by W Junk, The Hague; *Introduction to Invertebrate Conservation Biology* (Oxford University Press, Oxford) and Butterfly Conservation (Oxford University Press, Melbourne).

He has also given more than a dozen key presentations internationally in this field during the last decade – the latest as opening speaker at an American Museum of Natural History symposium in New York last year.

Professor New holds a BSc with first class honours and a PhD in insect ecology from the University of London. In the late 1960s he took part in Royal Society and Royal Geographical Society expeditions to Brazil. He later worked at the Research Institute for Biological Control in Ontaria, Canada, before joining La Trobe University as a lecturer in zoology. Professor New has been President of both the Australian Entomological Society and the Entomological Society of Victoria, and President of the International Society of Neuropterists. He has served on the editorial boards of many Australian and international scientific journals, including ten years until 2002 as regional editor of *Biological Conservation*, and is currently editor-in-chief of the *Journal of Insect Conservation*.

For five years, until 1992, he chaired the specialist group on butterflies and moths of the Species Survival Commission of the World Conservation Union (IUCN). The Union draws its membership from 140 countries, generating environmental conventions, global standards, as well as scientific knowledge and leadership. He also served for eight years on the Federal Government's Endangered Species Advisory Committee.

His extensive contributions to zoology have been recognised with awards including the Royal Entomological Society's Marsh Christian Trust Award for Insect Conservation in 2003, and the Ian Mackerras Medal of the Australian Entomological Society, in 1988.

Professor New is a world authority in three distinct areas of entomology. These are studying the systematics (evolutionary interrelationships, diversification and change) and biology of two groups of insects: Psocoptera, small insects that live on bark and leaves, and Neuroptera, of which the best known examples are lacewings, important predators of crop pests; as well as his expertise in insect conservation.

His research has involved extensive field work, and has taken him from South America to the Indonesian volcanic island of Krakatao, and many parts of the Pacific region.

Professor of Marketing appointed

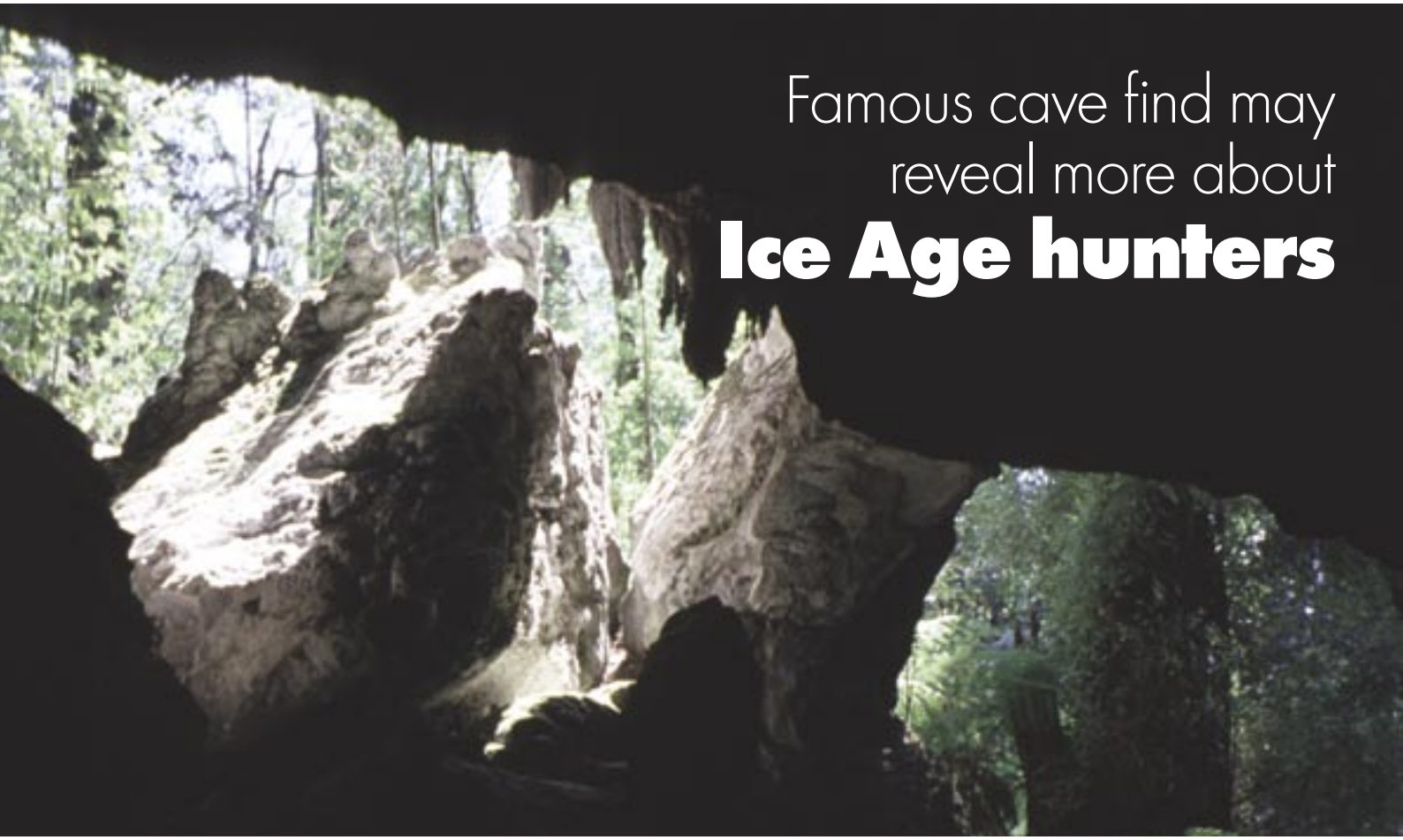
Geoffrey Durden, an expert in international marketing specialising in cross-national and cross-cultural research, has been appointed Professor of Marketing in La Trobe University's Graduate School of Management.

Professor Durden, who is Head of the Graduate School of Management at La Trobe, previously served as Visiting Professor of Marketing. From 1974 to 2001 he worked at Victoria University of Wellington, New Zealand, where he was Director of Postgraduate Studies in Marketing. Prior to that, he was lecturer in Operations Management at Coventry University, UK.

Professor Durden's research projects include evaluating export service quality in Asia, based on a study he has carried out in Taiwan, and a five-nation study on export information use.

His work has been published in leading international marketing journals, including the *Journal of International Marketing* and *International Marketing Review*. He has presented many of his research findings abroad, at meetings of organisations including the Academy of International Business, USA, and the European Marketing Academy. As well as extensive experience in undergraduate and postgraduate teaching, Professor Durden has specialised in executive development programs and distance learning.

At La Trobe, and previously in New Zealand, he has encouraged interaction between students and local businesses, with MBA candidates developing international marketing plans to help firms maximise their export profits.



Famous cave find may reveal more about **Ice Age hunters**

When Tasmanian Aborigines were confronted by the last Great Ice Age 20,000 years ago, how did they make a living in the harsh conditions on the edge of the southern ice?

The answer to this question may come from a new study by La Trobe University postdoctoral archaeology researcher, Jillian Garvey.

Ms Garvey will analyse animal bones excavated from one of Tasmania's most famous Ice Age sites, Kutikina Cave on the Franklin River.

The cultural heritage value of the site was one reason why the High Court of Australia in 1983 stopped work on the Gordon-below-Franklin dam that would otherwise have flooded the cave.

In 1981 Dr Kevin Kiernan, from the University of Tasmania, Professor Rhys Jones, ANU, and Mr Don Ranson of Tasmania National Parks and Wildlife, excavated 250,000 fragments of animal bones and 25,000 stone tools at the site.

Early analysis showed the bones dated back more than 20,000 years and were part of the glacial human diet, mainly Bennett's wallaby and wombat. 'However, until now, the prehistoric importance of the animal remains had not been fully realised,' Ms Garvey said.

Her research is supported by the Tasmanian Aboriginal Lands Council and a $47,000 Australian Institute of Aboriginal and Torres Strait Islander Studies grant.

Ms Garvey, Dr Richard Cosgrove, a senior lecturer in La Trobe's Archaeology Program, and Dr Anne-Pike Tay of Vassar College, New York, will investigate the Kutikina Cave material for information about the behaviour of humans living there during the height of the last Ice Age.

Ms Garvey said that, in relation to the history of human behaviour, the contents of the cave rated in importance with material found in several caves in France.

> The prehistoric importance of the animal remains has not been fully realised.

'Analysis of the bones, stone tools and other fragments will give us information about the hunting behaviour of humans living in the area which at the time of the last Ice Age was covered in glaciers.

'We will investigate how people lived under extreme conditions in which temperatures were between minus 15 C to plus 4 C.

'We want to discover whether these people were opportunistic hunters or engaged in planned and systematic hunting, harvesting game such as wallabies and wombats.'

A recent pilot project by Dr Cosgrove at a nearby site came up with a surprising finding: humans at the time hunted in mid-winter, indicating they planned to kill animals at a time when their fur was in prime condition and they had maximum fat. This suggests that these people were not mere puppets of the environment.

An article about Dr Cosgrove's pilot study appeared in *Nature Australia* in December last year.

Ms Garvey will extend this line of research, to determine whether animals were taken for their bone marrow – a highly nutritious and sought after food source – or for other reasons. She will do this by closely examining bone fragments which provide evidence about butchering strategy and age of the animals.

'The bones and stone tools used can provide quite specific details about the behaviour of the humans who used them,' she said.

Ms Garvey's project is part of a La Trobe University-Vassar College project initiated by Drs Cosgrove and Pike-Tay.

Grant for **new system** to **purify** waste water

The Biotechnology Research Centre at La Trobe University, Bendigo has started a three-year project to develop and evaluate a new and revolutionary process to purify waste water.

Professor Bob Seviour has received a $230,000 Australian Research Council grant over three years to develop a microbiological process to remove phosphorus, a major pollutant which causes blue green algae and other problems, from rivers and lakes.

The grant follows a grant of $396,000 over three years from the Victorian State Government's Smart Water Fund, awarded in May last year.

Existing methods of removing phosphorus require costly and complex plants which usually use chemical processes, most of which are unpredictable and unreliable.

These processes are based on cycling the 'biomass' – the polluted water – through alternate anaerobic and aerobic reactor zones.

'If we can develop a fully aerobic system, capable of being added onto the end of a conventional treatment plant, it would make protection of rivers and streams more feasible and cheaper,' Professor Seviour says.

Professor Seviour is developing an aerobic system conceived, in principle, by Professor Ron Bayly and Dr John May, formerly of Monash University. Now retired, both men will act as unpaid consultants to the project, to help with experimental design and data analyses.

Their aerobic process, says Professor Seviour, is 'revolutionarily different' from conventional 'enhanced biological phosphate removal' (EBPR) systems because it is carried out in a single reactor.

In this new system, selective pressures on microbes are applied in a totally different way than in conventional systems, which have been operating for three decades. Laboratory tests show that, with effluent from a conventional treatment plant, the process reduces phosphate concentration to a level which will not allow algal blooms to develop in receiving bodies of water into which the treated water is discharged.

Professor Seviour is seeking to understand the structure and function of the microbial communities selected under aerobic conditions to determine which are the polyphosphate accumulating organisms, and so provide a rational basis for monitoring and controlling waste water plants.

'We will scale up this process to pilot plant operation, allowing its performance to be assessed in treating effluent from a full-scale conventional activated sludge plant,' he says.

Professor Seviour believes the project will lead to a process with the potential for a wide range of phosphorus removal, cheaper and more flexible than systems now available.

Construction, or conversion of conventional plants to such a new system, is complex, slow and expensive, he says. For example, a plant to service about 100,000 people, like that in Bendigo, would cost more than $50 million.

For this reason, cheaper and better understood technology for EBPR would be economically attractive – especially for less wealthy countries where algal bloom and other problems are often severe because of agricultural practices.

'Thus this system should be readily exportable,' he says.

A research associate, Dr Joe Ahn, whose salary will be funded by La Trobe until mid 2006, will set up, maintain and run the system. Michael Beer, a research officer and Sarah Schroeder, a PhD student, will also be involved. The ARC funds will also be used to employ other researchers.

Breaking new ground in **mitochondrial** research

Two La Trobe University researchers in different fields are breaking new ground by bringing a computational approach to mainstream molecular biology to improve knowledge of the workings of mitochondria.

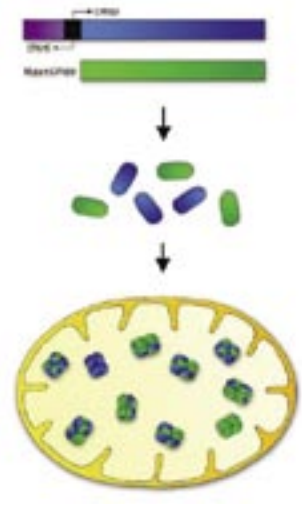


Diagram of a mitochondria.

They have received an ARC grant of $240,000 over three years to throw light on a key unresolved problem in cell biology – how a cell determines when it has the right amount of mitochondria to carry out its correct functions.

The unlikely combination comprises Head of Molecular Sciences and Professor of Biochemistry, Nick Hoogenraad, and senior lecturer in Computer Science and Computer Engineering, Dr Dianhui Wang, a specialist in data mining and computational intelligence techniques for bioinformatics and multimedia information processing.

Their's is a new approach to mitochondrial research Professor Hoogenraad has carried out with the help of ARC and other grants since 1974.

Mitochondria, Professor Hoogenraad explains, are 'organelles', highly specialised structures essential for the viability of cells. They contain the machinery to generate most of a cell's energy, but also play essential roles in synthesising compounds needed by the cell, and contain critical regulators of programmed cell death. Mammalian cells must have the right amount of mitochondria to perform certain functions, and the amount of mitochondria varies depending on the circumstances of the cell.

For example, the cells of a bear hibernating in the cold of winter, or a rat running on a treadmill become more packed with mitochondria. The action of the cold or the exercise provides a physiological 'push' and the animal responds by making more mitochondria.

'There must be a mechanism that senses the physiological push and this is what we are seeking. But here lies the problem, and here is where computer science is being introduced,' Professor Hoogenraad said.

'Human mitochondria have between 1,000 and 1,500 different proteins, encoded by a subset of the 30,000 genes in the nucleus of each cell. How does a cell co-ordinate the activities of 1,500 genes? There must be some kind of 'master switch' which controls all these genes.

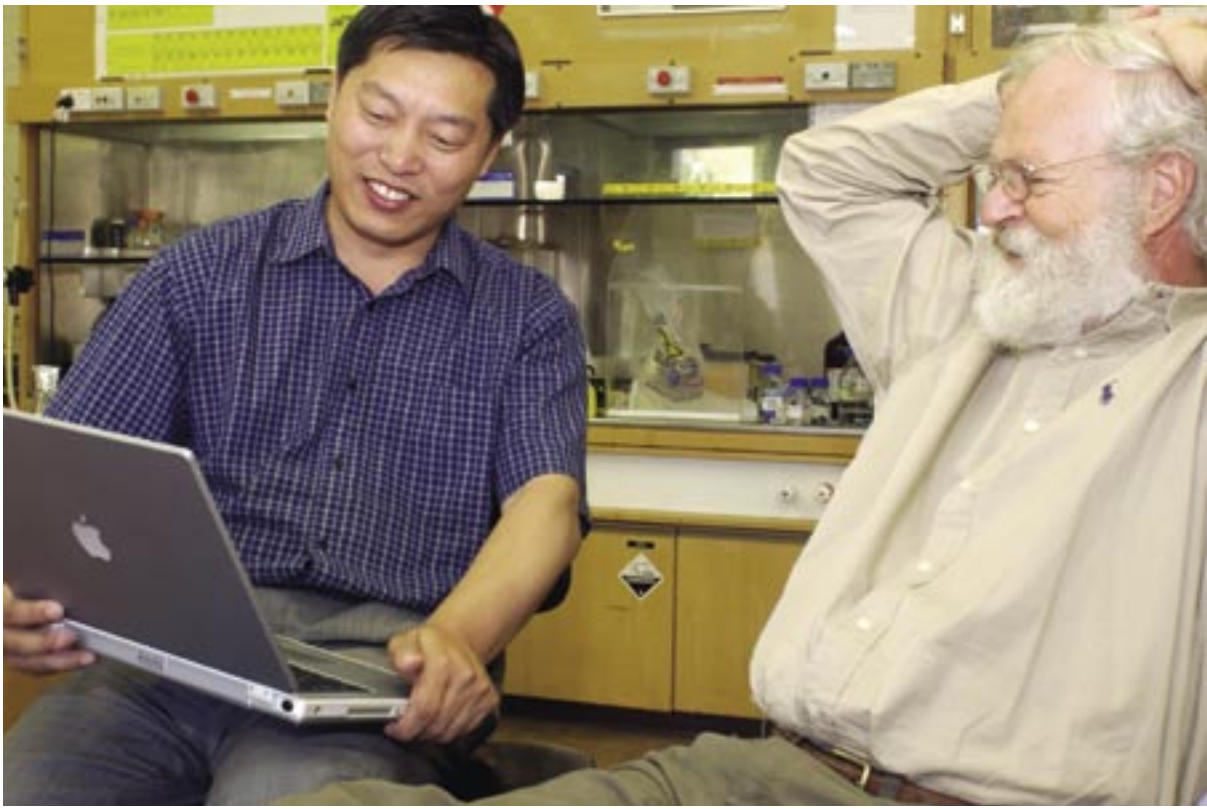
'We are using both a laboratory-based molecular genetics approach and a computational approach to examine a large number of genes encoding mitochondrial proteins to try to find some unifying information by which this control mechanism may occur.

'The computational aspect of this research is to process the information we believe is embedded in the genes. All these genes 'dance' to the same tune – the physiological push – and we are using the computational approach to find new paradigms for finding this information.

'However, while the computer will be an extremely valuable tool, anything the computational approach brings up will have to be verified in the laboratory. In bringing together the two disciplines of biochemistry and computer science there is great potential synergy in the nascent field of bioinformatics.

'The results of our work will provide information on the process of ageing as this process is associated with a loss in bio-energetic function and other conditions such as diabetes, obesity and cardiovascular disease in which mitochondrial oxidative metabolism is implicated.

'It will also provide an excellent training ground for research students to develop a set of unique and valuable skills.'



Professor Hoogenraad and Dr Wang: 'The results of our work will provide information on the process of ageing.'

LESS work, SAME income for graziers?

Dr Waschik: win-win for graziers and the environment

Australian graziers in arid and semi-arid zones could reduce their work load, maintain their income – and enhance the environment at the same time.

According to Dr Robert Waschik of La Trobe's Department of Economics and Finance, this win-win-win situation could be achieved if graziers in these zones embraced the Federal Government's National Reserve System (NRS) program by which land is removed from direct production and set aside for ecological purposes.

Dr Waschick bases this claim on research he has carried out with former La Trobe colleague, Dr Iain Fraser, who now works at Imperial College, University of London. Their study is to be published in a forthcoming issue of the journal, *Land Economics*, (University of Wisconsin Press, US).

As Australia produces 74 per cent of world raw wool exports, they argue that any reduction in wool production would reduce world supply – and under the basic rule of supply and demand, the price would rise.

For example, if production fell by 10 per cent, prices would rise by the same figure – and at the same time the environment would benefit as the land removed from direct economic production would recover over time and become a better habitat for native fauna and flora.

The researchers used a computer model known as Computable General Equilibrium to examine the economic implications for biodiversity of agricultural land retirement from wool production in Australia.

Earlier research by Dr Fraser had indicated that agricultural land retirement might offer in some circumstances a means of achieving NRS objectives cost effectively.

So the researchers were not surprised that their modelling confirmed the economic benefits to arid and semi-arid zone graziers from the Australian Government's stated objective of ensuring that a comprehensive, adequate and represented system of protected areas that contain samples of all regional ecosystems be established.

In 1996 Federal Government established the NRS program to achieve this. Between 1996 and 2001 the Government allocated $85 million to buy land – but funding since 2001 has been significantly reduced.

Dr Waschik said that the modelling encompassed the three main wool producing zones, Pastoral (the arid and semi-arid inland), Wheat-Sheep (central NSW and south-west Qld) and High Rainfall (between the Great Diving Range and the east coast).

The model showed that arid and semi-arid zone graziers would benefit most because wool and sheep meat were their only products. There was much less direct economic advantage to farmers in wheat-sheep and high rainfall areas because their land use was much more diversified.

For example, if farmers in the wheat-sheep zone reduced wheat production, it would have minimal effect on world wheat prices because Australia was only one of a number of major producers.

Dr Waschik said there appeared to be only one reason why land retirement in arid and semi-arid zones might not have the desired economic effect. This would be caused by 'slippage' – farmers clearing and bringing into production more land to make up for that retired under NRS or increasing production on their reduced holdings by more efficient use of available resources including labour.

This would have the effect of elevating production to the previous level, in turn reducing the price of wool.

Home alone – and loving it

Do you live alone? And if so, do you like it? And who cares?

Professor de Vaus

Answers to the first two questions may depend on personal taste or circumstances – but the answer to the third is important to help governments plan social policy and housing.

This is the reason why La Trobe University sociologist, Professor David de Vaus, has been allocated an ARC Discovery grant totalling $380,000 over five years to determine which Australians live alone, why, and the social, economic and infrastructural consequences.

'One of the major questions is whether the increase in the numbers of people living alone is a sign of social fragmentation and isolation, or whether it reflects new ways of forming relationships that are not based on households,' Professor de Vaus said.

A world specialist on how we live, Professor de Vaus, will supervise a three-stage investigation.

The first stage will examine existing census and survey data and the second will involve him and two PhD students, Ms Lixia Qu and Ms Jody Hughes, and others, interviewing hundreds of people who live alone.

The third stage will be a national survey of people living alone or who have lived alone, possibly part of the federal-government funded survey of Household, Income and Labour Dynamics Australia (HILDA) which has been going since 2001.

'Obviously there are many reasons why individuals live alone,' says Professor de Vaus who recently completed a report, *Diversity and Change in Australian Families*, launched late last year by the Minister for Family and Community Services, Senator Kay Patterson.

'These include the decrease or delays in partnering, the death of a partner, break-up of a relationship, young people leaving their parents' home, and those who simply like to live alone.

'There is another interesting category – those who have a partner but choose to live apart. This is known as the living-apart-together group and is a relatively new phenomenon which we believe exists mostly among those affluent enough to afford two residences.'

After analysing government and other information, Professor de Vaus and his team will visit hundreds of people who live alone to find out whether their situation is transitional or permanent, why they live alone and what types of social relationships they have.

'We know that in Western Europe, about one third of households have only one person. In Australia about a quarter of households have just one person and this is expected to grow to a third within the next 20 years. We also need to know the ratio of cases in which living alone is a preferred arrangement or has come about by force of circumstances.

'Another important question is whether living alone reflects the increasing trend in our society towards individualism.

'In determining the causes and consequences of the increase in living alone, the study will help identify those who are at risk and assist with effective targeting of support and interventions.

'It will also help governments to adopt realistic housing, building and social policies.'

Professor de Vaus expects the report *Living Alone in Australia*, will be completed by the end of 2009.

Documenting change in Australian families

A new book by La Trobe University Head of Sociology, Professor David de Vaus, provides a snapshot and valuable information on trends in Australian family life during the last 30 years.

Titled *Diversity and Change in Australian Families: Statistical Profiles* (see main story), it provides a comprehensive picture of life in Australia. Topics cover family and household types; marriage; fertility; relationship breakdown; spending; time use; caring for children, older people and those with disabilities; and work.

Launching the book late last year, Senator Kay Patterson, Minister for Family and Community Services, said it will prove invaluable to Australia's government, community, welfare, business and academic sectors.

Awards for musculoskeletal research

La Trobe Musculoskeletal Research Centre's Dr **Nicholas Taylor**, Dr **Nora Shields** and Dr **Karen Dodd** have won a Business and Higher Education Round Table award for outstanding achievement in Research and Development Collaboration. It was presented by the Minister for Citizenship and Multicultural Affairs, Mr Peter McGauran.

The researchers helped devise a program of physical activity for people with disabilities, drawing on the skills of clinical researchers, business people, service providers and local communities. The program has been praised both for the health and social gains achieved by those taking part and its wider economic benefits.

At a recent Sports Medicine Australia conference in Alice Springs, two researchers from the Centre took out two major prizes. Ms **Ebonie Scase** won the NSW Sporting Injury Committee prize for best young investigator, for work on injury prevention. She wins a trip to Nashville, Tennessee to present her work at the American College of Sports medicine conference in June. Dr **Kate Webster** was awarded the Asics prize for best clinical paper, dealing with lower limb injuries.

And two PhD students in the School of Physiotherapy, **Simone O'Shea** and **Fiona Dobson**, have won the prestigious Menzies Scholarship in Allied Health Sciences, presented recently by Sir Ninian Stephens.

Recognition for sociologist

SENIOR LECTURER IN SOCIOLOGY, Ms **Katy Richmond**, has won an award from the Australian Sociological Association (TASA) for her 'Distinguished Service' to the discipline, spanning some 40 years. Ms Richmond has taught at La Trobe since 1966.

She has served as president, secretary, and treasurer of the Association, and was a founding member of its women's section. In 2002, she helped bring the International Sociological Association World Sociology Congress to Australia, in Brisbane, and she has organised three national sociology conferences at La Trobe, including, last year's TASA conference.

La Trobe University Head of Physics, Professor Peter Dyson, right, helps 'Sun and Science' summer students with one of their projects on the main Melbourne campus at Bundoora, see story below.

Summer **science camp draws** students from afar

MIXING SCIENCE with fun in the sun at La Trobe University proved irresistible for 40 senior secondary students this summer. From city and country Victoria, six of them this year also came all the way from Singapore.

The students and some of their teachers took part in the University's annual 'Sun and Science Experience', a highly successful camp-style program sponsored by the Faculty of Science, Engineering and Technology, the Australian Institute of Physics, and the Science Teachers Association of Victoria.

Organiser, Dr **Wan Ng**, lecturer in science education in the University's Institute for Education, says the camp provided four days of action-packed learning about science in an exciting, relevant and interesting manner.

Students built solar-powered devices including battery chargers for re-charging their portable disc players and solar-powered cookers for summer barbecues.

Dr Ng says she began the camp three years ago to show school students the relevance of science learning, particularly at years 9 and 11 levels when many 'tune out' of science. Apart from Singapore, a school in Malaysia is planning to send 30 students next year.

'Tapping into students' interest in solar energy and environmental issues and giving them a chance to be involved in hands-on activities building useful devices is a good way of fostering their interest in science,' she says.

A solar science website has been developed for the program, see *www.latrobe.edu.au/solar*, featuring curriculum activities for teachers to use in the classroom.

Dr Ng has been awarded $10,000 federal government grant to upgrade her qualifications in education for gifted children.

Professor Nay

Aged care

New book queries old 'truths'

A book praised in reviews for challenging preconceived ideas by most health care professionals that it is their responsibility to decide the type of care provided to older people, has won the *Australasian Journal on Ageing* 2004 Book Award.

Titled *Nursing Older People: Issues and Innovations*, the book was edited by La Trobe Head of Gerontic Nursing, Professor Rhonda Nay, and colleague Sally Garratt, Adjunct Associate Professor in the Gerontic Nursing Clinical School.

The book points out that the proportion of people over 65 years of age that health professionals deal with, will increase exponentially over the next 20 years.

It features contributions by La Trobe staff, including Dean of Health Sciences, Professor Stephen Duckett, and draws on research by the various authors, combined with real-life examples from clinical practice. Professor Nay – who is also Director of the Australian Centre for Evidence Based Aged Care – says reviewers have commented favourably on this use of vignettes and case studies to link 'theory' with the clinical nursing of older people in their own homes and in residential and acute care.

The book reveals that most older people live in their own home – and questions the perception that they cost more when they need acute care.

As one reviewer, Professor Desley Hegney from the University of Queensland's Medical Faculty, noted: 'Insufficient research has been carried out to support this assumption and (it) may be that older people, despite their longer stay, actually cost less in the acute care environment.'

Professor Hegney said the book also highlights that nursing older people requires special skills and knowledge – and that care is being compromised by the increasing number of unregulated providers replacing registered and enrolled nurses.

It also raises the issue that care decisions should be made by older people, not health professionals, noting that professionals entering people's homes to provide care may actually disrupt care arrangements.

Professor Hegney said the book also makes the point that older people, especially those with chronic disease, are more likely to manage their own medications better than health professionals, (and that) 'older people who self-manage their care, will not be interested in what the health professionals think they need, rather they will be the decision-makers with regard to their care'.

Family focus for depression study

A PROJECT THAT BRINGS FAMILIES TOGETHER to fight the effects of depression is being piloted in the western suburbs of Melbourne. Run by the Bouverie Centre, it aims to improve the understanding of families who have a member with depression, and how these families can help them recover from their condition.

Coordinator of the study, clinical psychologist, Dr Grace Couchman, says if the pilot proves successful, the technique will complement existing medical and psychological approaches to treating depression. The Bouverie Centre – part of La Trobe University's Faculty of Health Sciences – is a specialist mental health service that takes a family-orientated approach to research and therapy.

It is conducting the project in conjunction with local Community Health Centres and general practitioners, with funding from 'Beyond Blue', the National Depression Initiative.

Dr Couchman says while there has been increasing community awareness of depression, there is still insufficient recognition of its impact on families. 'Family members can end up feeling lost and helpless as they struggle to make sense of what is happening to their relatives, and how they can assist.'

'Tall treatment' linked to reduced fertility

Research at La Trobe University's Mother and Child Health Research Centre has linked a height-control program for tall girls to impaired fertility in later life.

The research linked a therapy in which oestrogen was given to tall adolescent girls to reduce their adult height to decreased fertility in later life. The use of oestrogens to reduce the potential height of tall adolescent girls began more than half a century ago and has been used in the USA, Europe and Australia.

The findings also have implications for understanding reproductive biology. The suggestion that oestrogen exposure during puberty might program reproductive potential in later life opens new opportunities for understanding female fertility.

An eight-member research team, of whom three are current staff members of La Trobe's Mother and Child Health Research Centre (MCHR), and three are former members, has published the result of their project in the British medical journal, *The Lancet*.

Educational web for the common

Globally available free course materials such as lecture notes, reading lists and assignments … a world-wide network of shared, remote laboratories for electronics, physics and chemistry experiments … on-line assessment tools and open-source repositories for research results …

All this, and more, spells university outreach on a mega scale.

World-renowned information technology specialist, educator and visionary, Professor Hal Abelson from Massachusetts Institute of Technology (MIT), put the case for these developments – which at first seem a radical departure from the increasingly common 'business' model of the modern university – during a recent visit hosted by La Trobe University.

Delivering a seminar on educational technology and institutional change on the main Melbourne campus at Bundoora, he said that since 2001 MIT has been a global pioneer and exponent of 'Open Courseware'.

MIT now publishes material from some 900 of its courses free of charge for use worldwide (Spanish and Chinese speakers are translating some of the courses) and has research and education alliances with Microsoft, Hewlett-Packard, Cambridge University and the University of Singapore.

'Giving away courses has turned out to be a much better business decision for MIT,' Professor Abelson said. 'It was not about altruism, but leadership. Course materials can usually not be sold for much, but giving them away has helped us achieve strong support from the community and from foundations.'

MIT's core business, he said, was on-site education, charging students not for course content, but for their interaction with staff who are research leaders in their fields, for learning, and for certification of that learning.

He said the advent of information technology and the information economy has sown confusion about the role of the University as a public institution and 'civilising' force in society. Some people today saw universities simply as factories that produce educational content.

Dreams by many universities of making money from selling course material online – unless they were primarily in the business of remote of distance education – were illusory. 'If universities just want to sell stuff on the web, then they should become publishing companies,' he said.

Professor of Computer Science and Engineering at MIT, Hal Abelson is co-director of the 'MIT-Microsoft iCampus Alliance' in educational technology and co-head of MIT's Council on Educational Technology, which coordinates these developments. He is also a founding member of 'Creative Commons', Public Knowledge and the Free Software Foundation.

> Creating and supporting an extended university community.

Other developments in educational technology discussed by Professor Abelson included 'active classroom learning' and strengthening the public mission of universities through 'intellectual commons'. These, he said, offered greater knowledge sharing, while 'creative commons' maintained flexible copyright protection and freedom for authors, artists and educators in the face of increasingly restrictive legislation.

He also outlined new ways of institutional collaboration made possible by web services and other information technology, thereby creating and supporting an 'extended university community'.

Head of La Trobe Computer Science and Computer Engineering, Associate Professor Samar Singh, said La Trobe was pleased to be able to host Professor Abelson's visit and help expose students, staff and other Australian educators to his ideas.

Professor Ian Robinson, who heads La Trobe's School of Engineering and Mathematical Sciences, said his school was examining plans to affiliate with MIT's extended campus network, through an 'Australian Hub' when this is set up.

'We are keen to go ahead with co-operative projects to generally share our knowledge and teaching resources. In particular, we are keen to take on board and extend the ideas of active learning to set up a more "active" learning culture, and contribute to projects and laboratory facilities on the web.'

This, Professor Robinson said, may eventually help replace large lectures where students passively absorb information, with new active learning laboratories, where shorter instruction sessions are followed by students carrying out supervised interactive hands-on computer simulations.

'Initially this could be ideal for some large lectures, in subjects like physics, where MIT research has already demonstrated clear learning benefits, and possibly in other fields, where active learning results are still being assessed.'

Professor Abelson speaking at La Trobe University in January.

good

Crisis!

Unravelling the moral role of journalists

Martin Woollacott, former foreign editor of *The Guardian* newspaper in Britain, examined the role of journalists in international crises at a La Trobe University public lecture in January.

Mr Woollacott said Western journalists were emerging more and more as arbiters of the morality of the actions of their governments, especially internationally, sometimes playing a leading role in setting the terms of the moral debate.

A Visiting Fellow in La Trobe University's Institute for Advanced Study, he said that the press corps following such stories, in spite of its national and political diversity, often projected a common moral line. It usually favoured intervention, including military intervention, as the crises of the nineties in the Balkans and Africa showed – although Iraq had now put a question mark over such activism.

'This collectivity says, usually forcefully, that a war is right or wrong, a famine avoidable, a massacre could have been prevented, or a disaster alleviated earlier than it was.

'On-the-spot journalistic debate has the advantage of being conducted in visceral contact with events. It can trump debate far from the scene, or reinforce one side of it, with its suit of authenticity.'

The morality of crisis reporters involved policy for which reporters felt some responsibility, even if it did not specifically involve their own country.

'The press corps which covers crisis stories has been, and is, ninety-nine percent Western. Whether it is seen as benign or malign, Western, particularly American, power and how it should be used, or whether it should be used, are unavoidable factors in such stories.

'That is why foreign crisis reporters are, as well as moralists, also interventionists. Intervention, or the lack of it, is a central concern.'

Collectively embraced broad moral positions can also lead journalists to one of the worst sins – sacrificing truth to the cause.

'The most significant single example of this in my experience is the way in which reporters in Pnomh Penh in 1975, rightly convinced, in my view, of the uselessness and immorality of American policy in that country, allowed that to influence their reporting of the Khmer Rouge.

'That took the form, prior to the fall of Pnomh Penh, of downplaying information – and there was some – about the viciousness of the Khmer Rouge and, later, of a reluctance to accept refugee accounts of the terrible things that were happening in Cambodia.

'It is this area of moral difficulty, morality within morality, which often preoccupies those reporters who carry on thinking over the implications of the stories they have covered for years afterwards.'

However, Mr Woollacott said the biggest question of all, beyond the rights and wrongs of any particular intervention, is whether 'the long Western tradition of activism in the world is flawed in principle as well as in application'.

Formerly Middle East and Asia correspondent for *The Guardian*, Mr Woollacott was until recently also that newspaper's main commentator on international affairs.

The full text of his lecture, titled The Journalist and the Moralist, *is available from Tel: 03 9479 2316.*

TRAVEL INFORMATION making it **more mobile**

For travellers, finding the location of a restaurant or hotel, a museum or art gallery in a strange city may soon be as easy as reaching for their mobile phones…

A winning team of La Trobe University Computer Science and Computer Engineering students, as part of their Software Engineering Project, have helped Lonely Planet – one of the world's largest publishers of travel guides – add mapping features to existing digital travel information. The company eventually plans to make this available globally over mobile phones.

The software has been designed to use satellite-based Global Positioning System tracking technology to send the co-ordinates of the traveller's location to a server which then searches for information, say on all hotels within a certain area, and locates the relevant maps. This information, which includes prices and other features of nearby hotels, is sent to the mobile phone, complete with directions by either text or maps.

The system can deal with areas up to three kilometres from the location of the mobile phone user. It features a screen menu with buttons such as 'where am I', 'places to stay', 'places to see', eat, shop, and 'entertainment'.

The team of seven students – Peter George, Leonardo Di Clemente, Orcun Mayuk, Olga Diaz Gutierrez, Darshanand Hurkoo, Pamela Lee and Viet Dung Nguyen – won an award for best Software Engineering Project at a joint university – industry award ceremony held at the University's late last year.

Dean of Science, Technology and Engineering, Professor David Finlay, said the La Trobe Software Engineering Project provides valuable industry contact for students. 'The students have the opportunity to work on real problems to provide adequate and "in time" solutions for those problems.'

He said the project also encourages knowledge-sharing between the University and industry. 'Industry benefits by increasing its awareness of student skills, and we gain insights into new technological developments in industry.'

Software Engineering Project coordinator, Mr Torab Torabi, said the business requirement for the winning project was developed in consultation with Dr Ron Gallagher, Research and Development Manager for Lonely Planet.

Dr Gallagher said: 'The students have tackled many of the questions, beyond requirement expectation, including how much the service would cost to the mobile user.'

Lonely Planet, from its new base in Footscray, is moving its traditional text guide books to new digital technology: the web, handheld devices and mobile phones.

The company says the first of these products have been exported to Europe – travellers there can already access travel information via their mobile phones –satisfying consumer demand and producing a new range of export products with a world-wide market.

The second winning team of students – Lee Baker, Myles Carrucan, Aaron Fuller, Timothy Gregson, Warren Bailey and Mun Lee – developed an Online Data Backup System, in collaboration with a firm, Info-In, located on the University's Research and Development Park at Bundoora.

The company operates a secure online backup service from two Class A data centre locations in Melbourne and Auckland, for software and hardware manufacturers, retail outlets, disaster recovery consultants and education providers. The students worked on a new version of the service, to improve the system's user friendliness, management, distribution, compression and data encryption.

Mr Marcel Lenhoff, the CEO of Inof-In Pty Ltd, said: 'I suggested to students that they should think outside the nine dots. I can say that they have achieved this.' He said Info-In is continuing to work with the Department of Computer Science and Computer Engineering on the full development of the project.

Two students will be awarded an 'Agenda for New Manufacturing Scholarship' which provides a stipend to help develop these projects further this year. Valued at $15,000, the scholarship has been sponsored by the Victorian Department of Innovation, Industry & Regional Development, Lonely Planet, and La Trobe University.