

Campus News

UNIVERSITY OF WOLLONGONG

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September 1998

Signature tune of a scientific 'heretic'

How biologists raised the evolutionary dead

If Charles Darwin's theory of survival of the fittest is applied to the scientific establishment, then Ted Steele has had to be extremely fit.

It was a dispute over Darwin's ideas that first tested the survival skills of Associate Professor Steele, of the Department of Biological Sciences.

He brought the combined wrath of British science upon his head in the late 70s when he questioned an evolutionary sacred cow, attempting to take a fresh look at some of the ideas of French naturalist Jean Baptiste Lamarck.

Lamarck and Darwin disagreed on a key point: Lamarck argued physical characteristics acquired during the life of a parent, could be passed onto offspring.

Darwin's theory of natural selection 'proved' Lamarck wrong, even though Darwin himself remained open to debate.



• Ted Steele drinks a toast to scientific survivors at the launch of *Lamarck's Signature*.

•Continued page 2

Australian engineer outclasses world field

It is the engineering equivalent of winning the America's Cup -- it's worth \$US150,000 -- and an Australian engineer has won it.

Dr Geoff Brooks, a materials engineer at the University of Wollongong, is the first person outside North America to win the prestigious Iron and Steel Society award.

Engineering academics around

the world compete for the Ferrous Metallurgy Grant each year, using the funds for an educational project.

It is keenly contested and past winners include the Colorado School of Mines, Carnegie Mellon University, Ohio State University and Michigan Technological University.

Dr Brooks will use the award to fund undergraduate scholarships and overseas travel grants for students.

Wollongong students will be able to study for up to a year in leading US or Canadian universities.

The award recognises the University of Wollongong's international reputation in the steel industry. The application had support from the Department of Materials Engineering, the Institute for Steel Processing and Products and BHP Integrated Steel will provide vacation jobs for scholarship winners.

Department of Materials Engineering Head Professor Druce Dunne said the award was "emphatic proof of the international stature of the University of Wollongong in the

materials field".

Dr Brooks came to the University of Wollongong in 1993, working with internationally recognised steelmaking experts Professor Howard Worner and Professor Nick Standish, and credits both men with laying the groundwork for his success.

Dr Brooks lectures in the fundamentals of steelmaking and extractive metallurgy at undergraduate and postgraduate levels. His colleagues say his enthusiasm and drive have led to a resurgence in student interest in these fields.

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University of Wollongong

**COURSES
& CAREERS
festival**

**photo special
pages 6 & 7**

Bound for uncontaminated Botany Bay

Digging deep for a cleaner past

The Australian Nuclear Science and Technology Organisation (ANSTO) and the University of Wollongong are establishing the first pollution history of Sydney's Botany Bay.

ANSTO environmental radio-chemistry scientists and Environmental Science honours student Patrick Illott are developing the history from sediment cores taken from Towra Point Nature Reserve.

A reserve was chosen because sediments should be relatively undisturbed.

The core samples give a history of contaminants in the bay since development. They were collected from various sites in the reserve, including salt marshes and tidal flats.

The study differs from earlier work which simply compared contamination levels with recommended levels.

This study will establish the amounts of naturally-occurring metals by analysing and dating sediment samples extending from the first European settlement to the present.

The lowest levels of the 60cm core samples will give information on Towra Point's environment when Europeans first arrived. This is the baseline for measuring subsequent layers.

For example ANSTO analysis of the Georges River shows lead occurs naturally at 10 parts per million. Any more is pollution.

Project leader Dr Henk Heijnis said ANSTO has also produced pollution histories for parts of the Georges and Woronora rivers.

"We expect to find there has been a dramatic

increase in aluminium, cadmium, copper and since after World War II, following industrialisation of areas around Botany Bay and along the rivers flowing into it," he said.

"But we are also interested in the pollution history over time and how more recently introduced pollution controls have affected build-up of pollutants.

"We are also sampling in fine and coarse sediment areas, as fine sediments are more prone to accumulating contaminants, increasing the possibility of them moving into the food chain. For this reason, information from the study will be provided to the NSW National Parks and Wildlife Service," Dr Heijnis said.

A naturally-occurring radioactivity sequence is used to date sediment layers.

Uranium, present everywhere in the earth's crust, releases the radioactive gas radon into the atmosphere.

Radon decays in lead -210, which settles back onto the earth, into waters and sediments.

Because the rate at which it decays is known precisely, ANSTO uses sensitive nuclear analysis to date the sediments it is found in.

The technique has been used on samples taken



Patrick Illott (left) an Honours student in the Environmental Science Unit, University of Wollongong, and Dr Henk Heijnis, of ANSTO's Environment Division, take sediment core samples at Towra Point in Sydney's Botany Bay.

near Sydney's deep-water sewage outfalls to ensure sediments were being properly mixed and to establish pollution histories of Centennial Park and parts of the Hawkesbury River.

The joint ANSTO-University study should be finalised in November.

Book launch invites scientific controversy

• From page 1

Put simply, Lamarck argued giraffes gained long necks by stretching for out of reach food and could pass 'improvements' on in one generation.

However, the theory of natural selection said shorter-necked giraffes were simply not effective in the survival stakes and died out.

The theory of natural selection, espoused more rigidly and championed more ruthlessly by neo-Darwinists than by Darwin himself, coupled with the work of German scientist August Weismann, were the two heavy doors Ted Steele has found himself battering against for the past 20 years.

Weismann argued that there was no way changes in body cells could be transferred to sperm or ova, and therefore no way changes could be passed on to offspring.

Weismann's Barrier, as his concept was tagged, locked Lamarck out in the scientific cold for more than a century.

Professor Steele has crashed through the barrier.

The scientist who came in from the cold

He explains how in a book launched at the University of Wollongong on 14 September with co-authors Dr Robyn Lindley from the School of Information Technology and Computer Science and ANU collaborator Professor Bob Blanden.

Professor Blanden heads the Division of Immunology and Cell Biology at the John Curtin School of Medical Research in Canberra.

Their book *Lamarck's Signature* (Allen & Unwin) maps Steele's controversial career and the science underpinning his tilt at Weismann's Barrier.

Professor Steele and collaborators have shown it is possible for a characteristic acquired in one generation - an immune response for instance - to be passed on to offspring.

Rather than overturning Darwin, a space has been created for Lamarckian inheritance within the broader scheme of the theory of evolution.

Dr Keith Tognetti and Associate Professor John Schuster launched the book before a large crowd in the UniCentre Bookshop.

Professor Steele's ideas have attracted the attention of the national media and an ABC Television Lateline crew filmed the launch.

Professor Schuster argued that Professor Steele's challenge to 'survival of the fittest' will resonate outside science, just as Darwin's theories were interpreted socially and politically.

A full text of Professor Schuster's speech can be found in NewsBytes, via the University's home page.

Kerrie O'Connor ■

Academic charlatanism under debating spotlight

Do seances have any scientific validity? Is human-induced climate change just a myth?

Such issues are likely to come under the microscope when two well known scientists meet in the University of Wollongong's first invitational celebrity academic debate on 21 October.

The debate on the topic, *Academic charlatanism should be identified and eliminated*, is an initiative of the University's Academic Senate and it is hoped such a debate will become at least an annual event on campus.

The debate is being jointly organised by the Dean of the

Faculty of Creative Arts, Professor Sharon Bell, and Professor Philip Broadbridge of the School of Mathematics and Applied Statistics.

Ian Plimer is Professor of Geology and Head of the School of Earth Sciences, University of Melbourne, and he will be taking the positive side of the topic. Taking the negative side will be Mark Diesendorf who is Professor of Environmental Science and Director of the Institute for Sustainable Futures, University of Technology, Sydney.

Professor Plimer's research interests are in the chemistry of

natural processes which lead to the accumulation of metals and he has been active in the public arena with the promotion of science.

Professor Plimer is a regular broadcaster and has written various books for lay audiences — his 1994 book on religious fundamentalism, *Telling Lies for God*, had five reprints.

In 1995 he was awarded Australian Humanist of the year and the ABC Eureka Prize for the Promotion of Science. In 1997 Professor Plimer was made an Honorary Fellow of the Geological Society, London, for his courageous stand against "creation science".

At the 150th meeting of the German Geological Society, he was awarded the Leopold von Buch Medal for scientific research. It is the first time the medal has been won by an Australian.

Professor Diesendorf was originally educated as a physicist and applied mathematician. However, his current main research interests are sustainable energy, sustainable urban transportation and ecological economics.

He is a Board Member of the Sustainable Energy Industries Council of Australia (SEICA) Incorporated, a member of the Australian Co-operative Research Centre on Renewable Energy, a former President of the Australasian Wind Energy Association and has served on the Committee of the Australian and New Zealand Solar Energy Society.

He is co-editor and principal author of the transdisciplinary book, *Human Ecology, Human Economy: Ideas for an Ecologically Sustainable Future*.

The debate is open to anyone to attend and will be held from 12.35 to 1.30pm in the Hope Theatre.

Study of medicos' usage of computerised records wins silver medal

It is regarded as a stunning achievement simply to have a paper accepted at a World Medical Informatics Conference.

But PhD student and half-time associate lecturer David Bomba was left almost speechless when it was announced at the end of *MedInfo98*, held in Seoul, that he had won a silver medal with the best paper for a young scientist. He was one of only two young scientists to win a medal.

More than 1,500 delegates from 40 different nations attended the conference which is held only every three years.

The award is a major acknowledgement of David's PhD research. He spent three years investigating adoption and rejection rates of computerised medical records among Australian and Swedish general practitioners.

David's findings have shown that Swedish medical practitioners are much higher users of computers for record keeping and that Australian medicos overall are among the lowest users throughout the world.

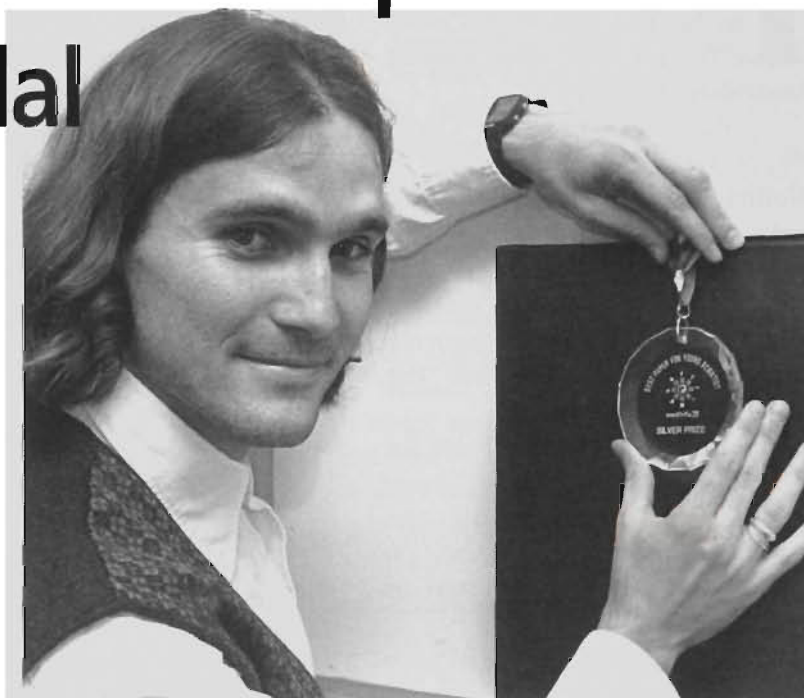
David's paper tried to present the "big picture" rather than get bogged down on endless statistics.

"I have tried to pull together the variety of reasons why some doctors accept the computerised use of medical record keeping and others stick to their handwritten card systems," David said.

He said many general practitioners regarded the use of computers as an attack on their "power base" as handwritten records were totally in their domain.

David pointed out in his paper that there were various legal and economic factors to be considered as to the ownership of material when one switched to the use of computers.

David said there were many benefits for doctors choosing to use computers especially in the area of epidemiological studies such as tracking particular diseases.



David Bomba with his silver medal from the World Medical Informatics Conference.

Former PM to present Sir Richard Kirby Lecture

Former Prime Minister Mr Bob Hawke will present the Department of Economics' 20th Sir Richard Kirby Lecture on Monday 12 October. The lecture will be held in the

Hope Theatre starting at 6.30pm. All are welcome to attend the public lecture.

For more information contact Sophie Abercrombie on 4221 3666.

North Wollongong Railway Station, which has the largest commuter throughput in the Illawarra, is undergoing a name change to the University of Wollongong Railway Station.

The station is the closest to the University of Wollongong and the Illawarra Institute of Technology and statistics reveal 900 university students each day commute by train to the University via this station during lecture terms.

Planning Services Manager, Mr David Macpherson, said signs were now being erected at the station in recognition of the key role the University plays through its location in North Wollongong.

Mr Macpherson said the change at the station is supported by government and transport authorities.

He said more and more students were expected to use the station over the coming years.

Student enrolments over the past five years have increased about 18 per cent to 13,000 while the projection of enrolments to 2005 is expected to show a further growth to about 15,300 students.

All aboard . . . from University of Wollongong railway station



• David Macpherson with one of the new railway signs at North Wollongong.

Australian universities' top web sites

It's official! The University of Wollongong has been named as having one of the most effective web sites among Australian universities.

Based on a study by Curtin University, the University of Wollongong was judged as one of eight universities to have the most effective web site. The other seven universities were Curtin, Western Australia, Murdoch, Melbourne, Queensland, RMIT and the University of Canberra.

Six people from the Centre for Educational Advancement at Curtin University examined all the Australian university web sites.

They made their evaluations on the following criteria:

How easy it was to find available courses, library catalogue, international study, lecturers, research information, location for different classes, examination results and contacts for senior management.

It also involved being able to locate information about such activities as campus facilities, sport or voluntary work.

The University of Wollongong web project (located at <http://www.uow.edu.au>) took four and a half months for staff and students to redevelop and was launched on 29 June. More than 25 people were



The team responsible for putting the site together (left to right): Uta Fischer, Camtu Nguyen (project manager), Rowen Atkinson, John Larkin, Kurt Brereton, Adam Orvad and Robert Robinson. Not present is David Brooks.

involved in the redevelopment and about 50 people involved in maintaining the whole web site.

Project manager for the web redevelopment, Camtu Nguyen, of Information Technology Services,

said the new page had increased from four to seven new categories and the number of pages in the second level had risen from 91 to 297.

Its success can be judged by positive feedback and the fact that

over one recent week the web site had received 823,891 hits from Australia and overseas. This is a vast increase from 349,071 hits in the first week of June before the redevelopment launch.

The perfect background for a career in steelmaking: prisons, pubs and poetry

“A controlled volcano” is Dr Geoff Brooks’ description of a steelworks but, in terms of sheer enthusiasm, he may as well be talking about himself.

This materials engineer may not reach an operating temperature of 1600 degrees Celsius, but it takes equivalent energy to inject passion into metallurgy lectures - something his students vouch for.

“He’s so excited about what he’s teaching, we get excited too,” seems to be consensus.

His peers in the United States were excited enough to award him a plum \$US150,000 grant to promote education in his field.

It’s the first time the Iron and Steel Society has picked an academic outside North America.

Perhaps it is the poet in him.

In an earlier incarnation, before deciding to ‘stop fiddling around’ at lots of things and get serious about a few, Geoff popped up in prisons and pubs reading poetry.

He was part of Melbourne’s street poetry movement, with a bit of blues guitar on the side, a Bachelor of Arts in the history and philosophy of science, a Bachelor of Chemical Engineering, not to mention a yen to clean up the environment.

In his early career he focussed his skills as a chemical engineer on solving environmental problems in chemical and metallurgical industries.

He then took a sideways jump, undertaking a PhD in extractive metallurgy.

Enter Professor Howard Worner, ‘hero and genius’.

Professor Worner spoke at Melbourne University and Geoff was hooked.

If the Macquarie Dictionary ever marks the word ‘waste’ as ‘archaic’, Howard Worner could take credit for kickstarting the process in industry, inventing processes to re-use just about anything.



• Dr Geoff Brooks’ passion for teaching has paid off for his students.

“Howard believes there is no such thing as waste,” Geoff said.

Geoff was inspired enough to want to work with him and Howard was impressed enough to take him.

Since arriving from Melbourne in 1993, he’s been the driving force behind revitalising the study of steelmaking at the University of Wollongong.

And to his own surprise, early plans for a research career have given way to a love of teaching.

“It’s a very big surprise to me,” he said.

“If I don’t end up doing the greatest research in the world, that’s OK.

“My role as an educator and helping people is just as important as research.” He gets huge satisfaction seeing “students do well”.

Geoff is a rare breed: he holds dual Arts and

Engineering degrees. “The shape of history has been changed by steel,” Geoff said.

He sees the first mass steel production by Bessemer in England last century as a defining moment, socially and politically - and one students need to grasp.

And the steel industry’s impact on the planet remains critical.

“Last year the world produced 800 million tonnes of steel and only 20 million tonnes of aluminium,” he said.

“We are trying to cut the amount of electricity used to make steel by 20 percent,” he said.

Because steel commands such a major share of the world market, even a small change in electricity consumption in the industry would have significant effects on the environment.

World authority on computer based learning project visits UOW

A visiting fellow from the Institute for Learning and Research Technology at the University of Bristol is about to leave the University of Wollongong after a six-month stint in the Department of Economics and CEDIR.

Li Lin Cheah was one of the Institute’s key developers in the computer based learning project, WinEcon.

WinEcon was funded under the UK Teaching and Learning Technology Program (TLTP) for 640,000 pounds and recently, a

further 300,000 pounds for second-phase development.

The TLTP Economics Consortium, a group of eight universities led by Bristol University, developed WinEcon.

Launched in 1995, the project has won three prestigious international awards. Through Li Lin, the University has become an offshore member of the consortium.

Li Lin is a recognised world authority on WinEcon and the Asymetrix Toolbook authoring software and has a special interest in

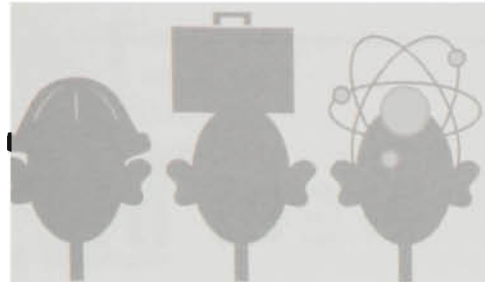
IT project management.

At the Department of Economics she is involved in several projects, including its funding application to the Committee for University Teaching and Staff Development; a submission to the 1998 ASCILITE (Australian Society for Computers in Learning in Tertiary Education) Awards, and has advised on the development of Nowra’s flexible delivery options. Li Lin Cheah’s visit to Wollongong is a welcome stop in her round-the-world tour from Bristol which began in September 1997.

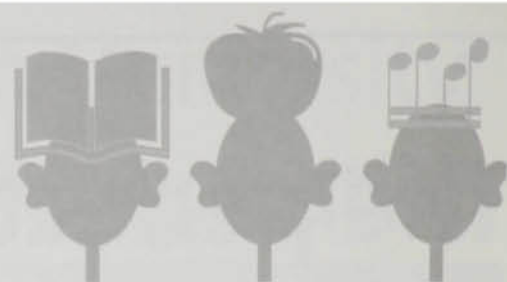
Wollongong has been a good base to explore coastal New South Wales.

A keen scuba diver of both temperate and tropical waters, she has also become a running enthusiast during her stay, entering the recent City to Surf, and joined in the Lindeman Pass bushwalk organised by the Social Club.

Li Lin is no stranger to Australia though: she has a BSc and DipCompSc from Monash University and La Trobe University respectively.



COURSES & CAREERS festival



Top Australian band "The Whitlams" entertained an appreciative crowd during the lunchtime break. They were supported by local band "The Sneaky Butchers".



Left: A quiet moment - all ages enjoyed the Courses & Careers Festival.

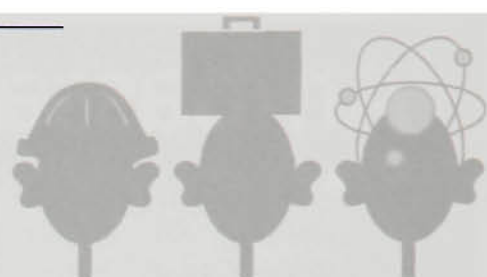
Right: Local radio station i98 came along for the fun.



The Mediaeval Society brought the past to life as the engineering faculty contemplated the future by organising a Navy Seahawk helicopter visit.



COURSES & CAREERS festival



Staff and students rallied together to produce one of the best "Open Days" in years.



And the winner is...

An excited Katie Lazarevski and family of Kiama, receive the Macintosh Performa 5200 from John Patterson, Open Day Chairperson and Gary Kelly, Associate Director of ITS, UOW.

The Year 9 student, who is top of her Computer Science class at school, has been saving for a computer for "years". She received the Macintosh Performa 5200 (Power PC) with CD ROM, Modem & software, from the IT Shop.



Sally-Anne Smith of North Wollongong, with UOW Vice-Chancellor Professor Gerard Sutton and STA Travel representative, Robin Gray. Sally-Anne who won the "Kiwi Experience" Trip for Two, from STA Travel, originally thought friends were playing a practical joke. She will take the trip to celebrate her graduation.

Ambassador for Spain visits campus

The Ambassador for Spain, His Excellency Sr Emilio Fernández-Castaño, visited the University of Wollongong in September during Spanish Week.

He was accompanied by Señora Teresa Gracia Martín, the Education Adviser in the Spanish Embassy.

While on campus, His Excellency the Ambassador opened an exhibition of pictures on the life of Spain's Philip II at the University Library and spoke on "Spain, the European Union and the Single Currency".

The Ambassador later undertook a tour of the campus.

Spanish Week was organised to mark the 400th anniversary of the death of Philip II of Spain (he of the Spanish Armada fame) and the centenary of the Crisis of 1898 — the year Spain lost the final remnants of its empire of Cuba, Puerto Rico and the Philippines. It was an empire that had made Spain the greatest European power in the 16th and 17th centuries.

The Research Program of the Institute of Social Change and Critical Inquiry, in conjunction with the Modern Languages Program of the Faculty of Arts organised the program of events which ran from 11 to 20 September.

Co-ordinator Dr Lorraine White said other events included a Spanish flamenco dance performed by the Ana Otero Flamenco Dance Group and a Spanish classical guitar recital by Scott Borg.

Several Spanish films were screened and

there was also various talks about Spanish events which have occurred over the past 400 years.

• *The Ambassador for Spain is pictured at the opening of the Phillip II exhibition with (from left) Spanish lecturer Josep Cufi; Dr Lorraine White and Dean of Arts Professor Anne Pauwels.*



Gala opening for Fac

The University of Wollongong held a colourful gala opening on 9 September for a new facility to house the multidisciplinary Faculty of Creative Arts.

The evening included 'snapshots' of creative works and performances produced by the faculty and tours of the building.

The building was opened by the Vice-Chancellor, Professor Gerard Sutton, and the Hon Dr Robert Hope, former Chancellor of the University of Wollongong.

"This facility represents not just an investment in necessary infrastructure but a bold statement that underpins the philosophy of the faculty," according to the Dean of the Faculty, Professor Sharon Bell.

The Faculty of Creative Arts offers undergraduate and postgraduate degrees in Creative Writing, Music and Theatre Performance, Visual Arts and Graphic

Design and New Media and also in the Graduate School of Journalism.

The new building has been designed around a central courtyard and each discipline has a major teaching space which opens on to the courtyard, and its centre piece, an Elizabethan style stage.

The internal corridors of the building are not just thoroughfares but active gallery spaces for the display of student and staff work and professional exhibitions.

• *Creative Writing students read their ode Odear, the Vice-Chancellor and the former Chancellor armed with garden shears for the ribbon cutting ceremony; excerpt from "Love Bytes"; Pro-Vice-Chancellor (Infrastructure), Southern Cross University, Professor Artur Pfischel (say it quickly!) aka impersonator Rodney Marks who was the guest speaker; and Professor Sharon Bell.*



Clean-up crew transforms campus in wake of storms

The often-invisible army of people responsible for keeping campus buildings and grounds in good order were very obvious in the aftermath of the August storms.

University of Wollongong cleaners, maintenance and landscape crews, staff and students worked together to restore the campus in time for the Courses and Careers Festival.

**After the floods,
the clean-up teams
worked extra shifts
to get the campus
back in order.**

The 9,000 visitors who attended the Festival on 30 August could find very little evidence of the several million dollars damage caused just a two weeks earlier.

About 11,500 square metres of carpet were ruined and more than 6,000 square metres had to be sanitised and deodorised.

Cleaners usually work early in the morning and are on their way home when everyone else is arriving.

After the storms, the clean-up teams worked extra shifts to get the campus back in order.

The concept of cleaners working in teams is a new one at the University.

In an overhaul of the section, cleaners have new work procedures, new equipment and are being provided with access to formal training which will

result in TAFE accreditation for their skills.

All cleaners will receive accreditation in client service and quality cleaning audit skills.

The \$60,000 training effort has been made possible through a DEETYA grant.

The EEO unit, the Career Development Unit and the Buildings and Grounds Division collaborated on the grant application.

According to EEO deputy director, Robyn Weekes, many cleaners are from non-English speaking backgrounds or women, two of the equity target groups for the EEO unit. The DEETYA grant has been secured for extensive training for all cleaning staff and improved literacy and numeracy training outcomes for 30% of cleaners.

Language skills, literacy and numeracy classes have been made available for cleaners like Clara Hrelja.

Clara said she had more confidence understanding and filling out forms, writing and reading, as well as communicating with other staff.

The establishment of teams means cultural issues could arise between cleaners of various backgrounds and part of the training has concerned cross-cultural team work.



Clara Hrelja is one of the clean-up crew who made sure the campus was ready for the Courses and Careers Festival. She has also been involved in a major training program which has included language, literacy and numeracy classes.

Clara said the language skills she has acquired will make it easier to work with new team members.

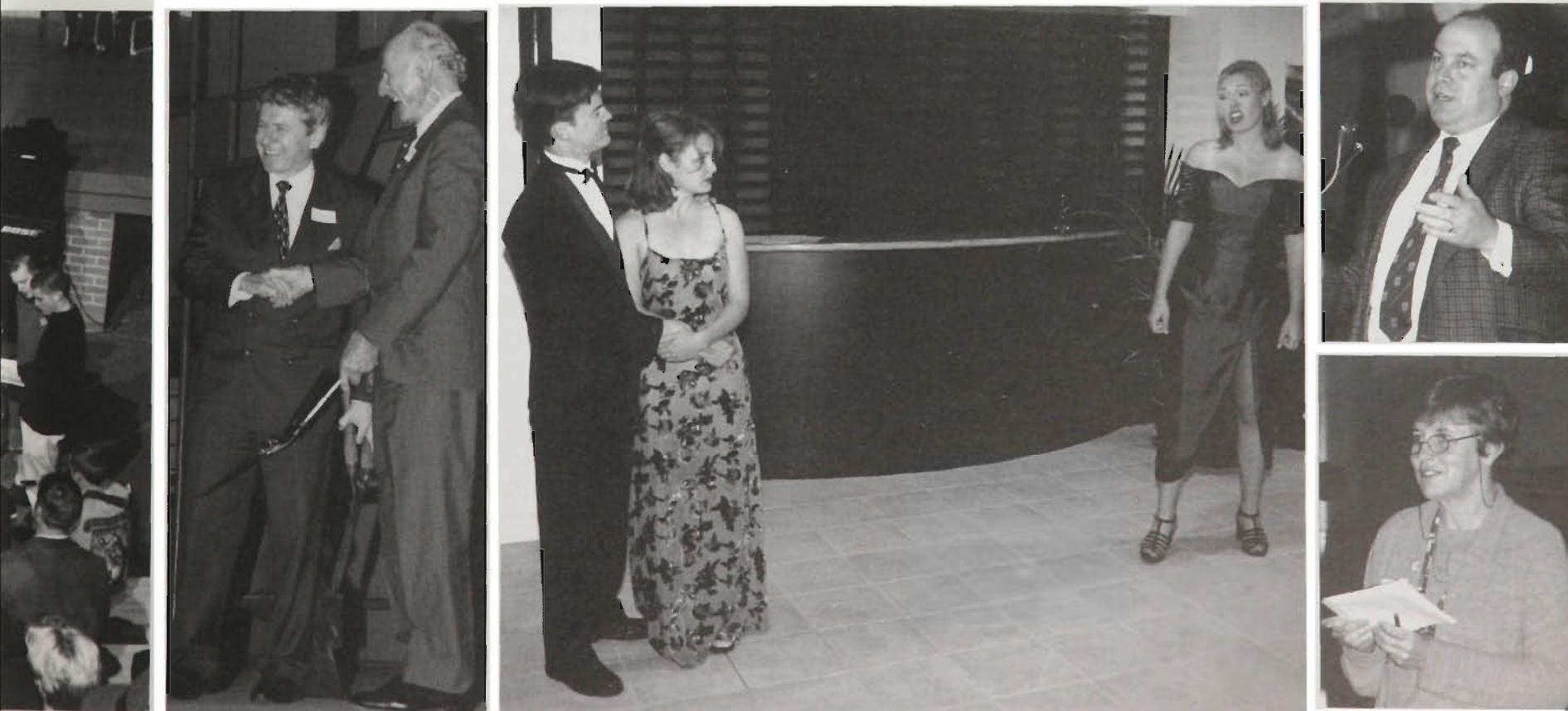
She said her vocabulary had improved and she was more certain of choosing the right words.

She welcomed the training, TAFE accreditation and especially the language, literacy and numeracy classes.

"Every little thing is useful," she said.

"I am more confident when I have an opportunity to talk to people."

ulty of Creative Arts



World first transport kiosk just the ticket

The NSW Minister for Transport, Mr Carl Scully, launched a Transport Information Kiosk in Wollongong on 10 August — a kiosk with massive potential for tourism including Sydney's 2000 Olympics.

Hailed as a "world first" by its creators at the University of Wollongong and others involved in the project, transport users will be able to find out via a computer-friendly touch screen the most appropriate combination of bus and train services.

Its uniqueness comes from being able to select trip starting and finishing points either by touching points and series of street maps, or alternatively by selecting from a street listing or landmark listing. Further, the system integrates all bus and train services across this region and into adjoining regions regardless of whether they are government or privately run.

Passengers will receive a free easy-to-read concise printout of the necessary timetable allowing them to know when the next several buses or trains will arrive, adjacent stops, where to change for any connecting service and final arrival time.

The stand-alone kiosk has been specifically designed for as wide a cross section of the community as possible by testing with focus groups of the various interest groups. The kiosk has been installed in the main business/shopping area of Crown Gateway Wollongong on a three-month trial to gauge community acceptance. The kiosk features video prompts and background voice instructions in the six most common languages in the Illawarra.

The transport information kiosk can be accessed by people with disabilities, the aged and those from non-English speaking backgrounds.

Planning Services Manager, Mr David Macpherson, said the kiosk had obvious potential beyond the Illawarra region especially in areas where there are a multitude of transport providers, in tourist hot spot areas, train stations, major bus interchanges, department stores and hotel/motels.

"There is nothing like our system anywhere else in the world," he said.

The University plans to licence the kiosk technology to a provider to market.

Meanwhile, the Transport Minister also launched another initiative by the



Mr Scully (centre) is flanked by David Macpherson (left) and the Acting Vice-Chancellor at the time of the launch, Professor Peter Robinson.

University of Wollongong — the SouthTrans Bus Service linking Miranda Fair with Wollongong and the University of Wollongong.

The University of Wollongong has a major stake in southern Sydney and considers it as a traditional catchment along with the Illawarra. The University of Wollongong is the preferred university for students south of the Georges River. Last year, 2,000 (or 20%) of University of Wollongong undergraduates came from the southern Sydney region while 1,400 (or 14%) were from southern Sydney south of the Georges River.

To meet growing commuter needs, the southern Sydney bus company, SouthTrans, has now begun regular services to Wollongong via the University from Miranda Fair. It is not only a boon to students but also provides Wollongong residents with a direct service to Miranda Fair for half and full day shopping trips.

The University of Wollongong launched these two initiatives in conjunction with the NSW Department of Transport and the Ageing and Disability Department. The University received all up funding of \$70,000 towards development of the kiosk initiative.

From convict fleet to dragon boat

Two Creative Arts academics from the University of Wollongong have played a major role in the production of a CD-ROM examining immigration and multiculturalism which was launched by the Minister for Communications and the Arts, Senator Richard Alston, on 28 August.

Dr Kurt Brereton and Ms Sarah Lambert, of the Graphic Design and New Media area of Creative Arts, art directed the interface design elements of the CD production.

The CD, *Convict Fleet to Dragon Boat*, takes a confronting and personal look at immigration

and multiculturalism in Australia. It discusses issues as they affect migrants and Australian society.

Produced by the National Archives of Australia, Multicultural Communities Council of South Australia and Ripple Media, the CD-ROM goes directly to the migrants themselves.

For more information about the CD-ROM visit the web site: www.naa.gov.au/educate/dragon/index.html

Dr Brereton and Ms Lambert have also recently produced the CD title: *The Fibre Art of Janet Brereton*, now distributed throughout NSW high schools. The interactive CD accompanies a major retrospective art exhibition of the pioneer fibre artist which is now touring Australia until 2000. For more information see the web site: www.mypostbox.com/facelift or <http://fdnet.com.au/Janet Brereton>

Wollongong plays host to international oceans conference

An International Conference to mark the United Nations Year of the Oceans will be held at the University of Wollongong on 8 and 9 October.

The conference is entitled *Preservation and Protection of the Marine Environment* and will examine the roles of science, law and public policy in the approach of states to protecting the marine environment in the Asia Pacific and throughout the world.

It is the major event in the three-year project *Science, Law and Policy for Management of the Marine Environment* being conducted jointly by the University of Wollongong and the Ocean

University of Qingdao. This is an approved project under the Australia China Institutional Links Program (Phase 2) using funds provided by AusAID.

The conference will discuss:

- Oceans Policy
- Marine Biodiversity
- Marine Industry
- Marine Environment
- Ports and Estuaries
- Community Participation
- Regional Co-operation

For further information contact the Centre for Maritime Policy on (02) 4221 3224.

The conference venue will be the McKinnon Building (Building 67/ Lecture Theatre 104).

OBITUARY:

William (Bill) McGrath

Bill (William Clement) McGrath, Foundation Principal of Wollongong Teachers College, died in Concord Hospital on 3 July, aged 85.

The son of a police officer, Bill began a distinguished career in education as a student at Armidale Teachers' College and took up his first post at Lewisham in Sydney.

As a promising footballer he played for St George.



At the outbreak of World War 11, he joined the RAAF and served in Europe in Bomber Command.

Before returning to Australia he was a member of the Australian Services Rugby team.

He resumed his teaching career and after a year's study at the University of London, where he gained the AIE, he served as a District Inspector in the NSW Department of Education.

On the establishment of Wollongong Teachers' College with a Physical Education specialisation, Bill was appointed its first Principal, skilfully directing its development until, with its buildings complete but inadequate, it was officially opened in 1965. For several more years the College flowed over into rooms in the Technical College.

As head of a college within the NSW Department of Education, he

was dominant but not domineering, approachable and compassionate to staff and students alike but never relenting in his attempts to ensure that his own high moral and religious principles were reflected in the life of the college.

Early on, he saw the possibilities of co-operation in academic matters with the University College on the adjacent campus and from about 1971 he took the initiative of organising, with Professor Charles Gray, informal meetings between senior members of staff.

While nothing of any consequence directly emerged from these meetings it is certain that an important reservoir of goodwill between senior members of staff did remain to counter the strong opposition of junior members of university staff.

Bill was a member of the Council of the Wollongong University College until its last days.

On his retirement from the college in 1974 he became Principal of the Catholic Teachers' College at North Sydney.

Assisted by his wife, Dorothy, who worked as his secretary, Bill drew upon his wide educational and administrative experience, especially in the use of limited resources, to bring about CTC's emergence as a significant element in what became the Sydney Campus of the Catholic University.

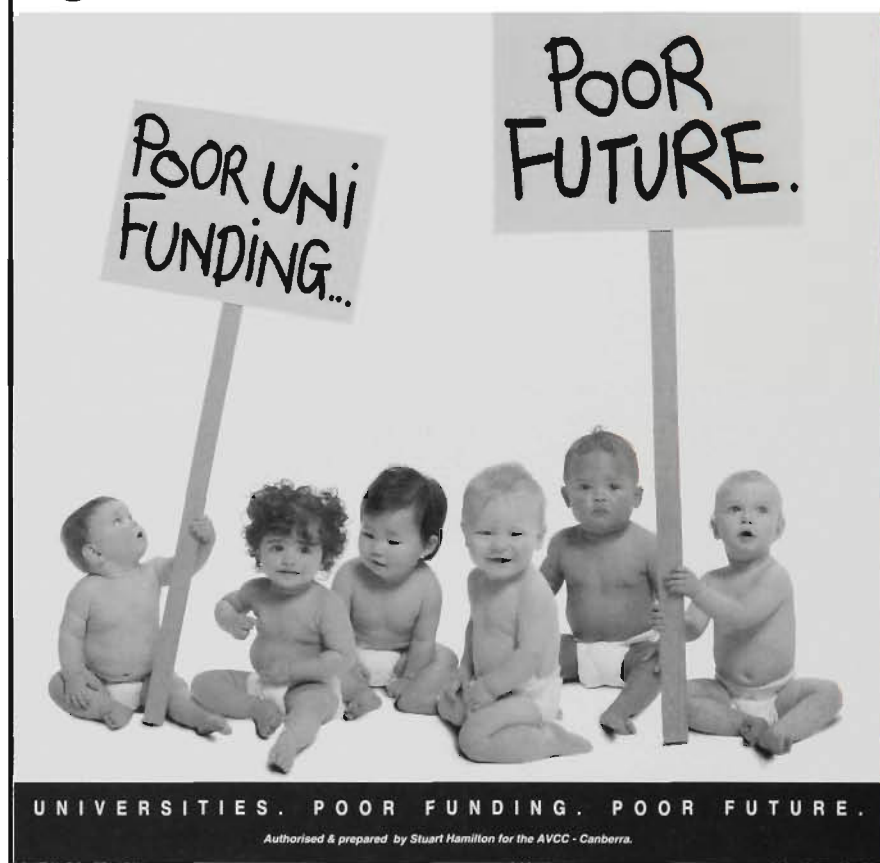
His work was recognised by an Honorary Academic Award and the naming of the library after him.

On his retirement he and Dorothy settled in Southport, Queensland, but his health deteriorated and his last few days were spent in Sydney.

Our condolences and sympathy to Dorothy and their family.

By Walter Pike
Vice-Principal,
Wollongong Teachers' College
(1969-80) and Hon D.Litt,
University of Wollongong

A MESSAGE FOR JOHN HOWARD & KIM BEAZLEY



A d v e r t i s e m e n t



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Universities – the plan for a brighter future

Australia's universities have an outstanding worldwide reputation for the excellence of their teaching, research and scholarship. We tend to take for granted just how central they have been in shaping Australia as a modern nation.

However, in recent years, public funding per student has declined substantially. At the same time, the cost of keeping up with the rest of the world has been going up, with many nations investing heavily in university education.

If we are not careful, we will be a follower... not a leader.

We must also ensure that everyone who can benefit can get an affordable university place.

In the forthcoming federal election, please consider casting your vote for candidates who look beyond today's news headlines.

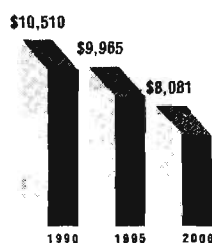
Vote for investment in the future.



Professor John Niland

President,
Australian Vice-Chancellors' Committee

Decline in Government Funding per student (not of HECS).



(Data sourced from Commonwealth Government publications)

**WE NOW LIVE IN A FAST CHANGING GLOBAL SOCIETY.
TO HAVE A LEADING ROLE IN THAT SOCIETY AUSTRALIA
MUST HAVE A STRONG UNIVERSITY SYSTEM THAT
PRODUCES A FLEXIBLE AND HIGHLY EDUCATED
WORKFORCE AND INNOVATIVE RESEARCHERS.**

In the last ten years, our universities have been working hard to meet the rapidly emerging demands generated by these global changes. Education is now Australia's sixth highest export earner.

But Government funding for universities has not kept pace. Nor have Government policies helped to increase private giving and investment.

Pressures are emerging through expansion in class sizes, difficulties in keeping specialist courses, and reduction in staff numbers.

Public and private funds need to be increased to prevent a widening gap between our aspirations and our achievements.

What is needed?

To compete with the rest of the world, the Australian Government must stop using the money it gets from students through the HECS scheme as an excuse for reducing its own contributions (see chart). Returning to universities the money it pockets from the rise in student payments would be a good start. The Government should also amend its taxation laws to encourage private and business contributions.

Sound too hard? To make a significant turnaround in the current situation will require only that total funding for higher education should go from its present level of just below 1.9% of current Gross Domestic Product to just over 2%. Surely when our future is at stake, this is achievable!

A Ten Point Plan for Success

1. To improve access, increase the number of publicly funded places.
2. To keep study affordable – do not require students to repay their HECS debt when they are still struggling in low paid or casual jobs.
3. Don't expect parents to support their adult children as they now have to; and allow education costs to be claimed as a tax deduction.
4. Improve equity by giving private fee payers access to HECS loans.
5. Support innovative and effective teaching through a Teaching Quality Fund.
6. Increase money for research to maintain Australia's world-class research effort.
7. Strengthen the links between universities and industry through better tax treatment of investment in research and development.
8. Enable universities to invest in high quality staff through adjusting Government grants to match economy-wide wage cost changes.
9. Help our universities broaden their international focus as a way of exposing students to the world, and of showing the world who we are and what we are capable of achieving.
10. Change the tax system to encourage private bequests.

Further details on the ten points are available from the AVCC by phoning (02) 6285 8234.

Authorised and prepared by Stuart Hamilton for the AVCC - Canberra

ITC 'hits the ground running' in new video

The Illawarra Technology Corporation (ITC) features in a new Austrade corporate video entitled, "Hit the Ground Running".

As the Australian Government's official international trade and investment facilitation agency, Austrade helps take various businesses to the world.

Austrade has a global network of experts who can act as facilitators in helping businesses establish exports, new markets and investments.

In the video, the previous joint Managing Director and now Deputy Chairman of ITC, Dr Brian Hickman, praises the services of Austrade saying they have been of considerable assistance in a highly competitive environment.

As the commercial arm of the University of Wollongong, ITC undertakes various commercial activities which are best done outside the main structure of the University.

Dr Hickman said ITC's activities included a number of education services, overseas projects, technology transfer activities and the operation of the Dubai campus in the United Arab Emirates.



University of Wollongong

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Calling Cyber-teens

Year 11 students can attend a Non-Stop Cyberday at the University on Friday 9 October.

It is part of the Australian Information Technology Spring School and is open to 3 Unit Maths or 2/3 Unit (Related) Computing Studies. The School of Information Technology and Computer Science has reserved some places for teachers and parents. Workshops on email, Netscape, HTML and JAVA will be held, along with a live video-conference with students in the US. Foundation Law Project Manager Sandra Davey will give the keynote address and IT lecturer Peter Castle will demonstrate computer graphics for movies.

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