

# MONTAGE

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## NEWS AND VIEWS FROM MONASH UNIVERSITY

### Keeping a mind on crime

**M**onash forensic psychiatrist Professor Paul Mullen has been appointed to run Victoria's new Institute for Forensic Psychiatry.

The State Government released preliminary plans for the \$25 million development in April and expects the institute to be operating by late 1997.

The institute, to be built in the grounds of Melbourne's Fairfield Hospital and Fairlea Women's Prison, will contain a security hospital and state-of-the-art training and research facilities. It will have beds for 120 psychiatric patients and 15 intellectually disabled clients on two separate sites.

Patients to be treated at the institute include those suffering from severe mental disorders like schizophrenia, manic illnesses and severe depression, which have been associated with acts of violence. This includes people obsessed with morbid jealousies and erotomanias, such as stalkers.

Professor Mullen was appointed Monash University's professor of forensic psychiatry three years ago, having previously been professor of psychiatric medicine at the University of Otago, in Dunedin, New Zealand.

A major reason for his move was the desire to help establish a forensic psychiatry facility in Victoria which combined clinical care with academic research.

"It's been really gratifying that the State Government has taken this on as a priority," he said. "Our patients are a group of people

who have enormous needs and must be treated properly in the interests of public safety, but they don't attract many political brownie points."

Professor Mullen said some nearby residents had expressed concerns about the development, which was perfectly understandable. He stressed that security would be an important element of the new psychiatric hospital.

"There has always been a very real fear in communities of the mentally ill, and a considerable fear of criminals," he said.

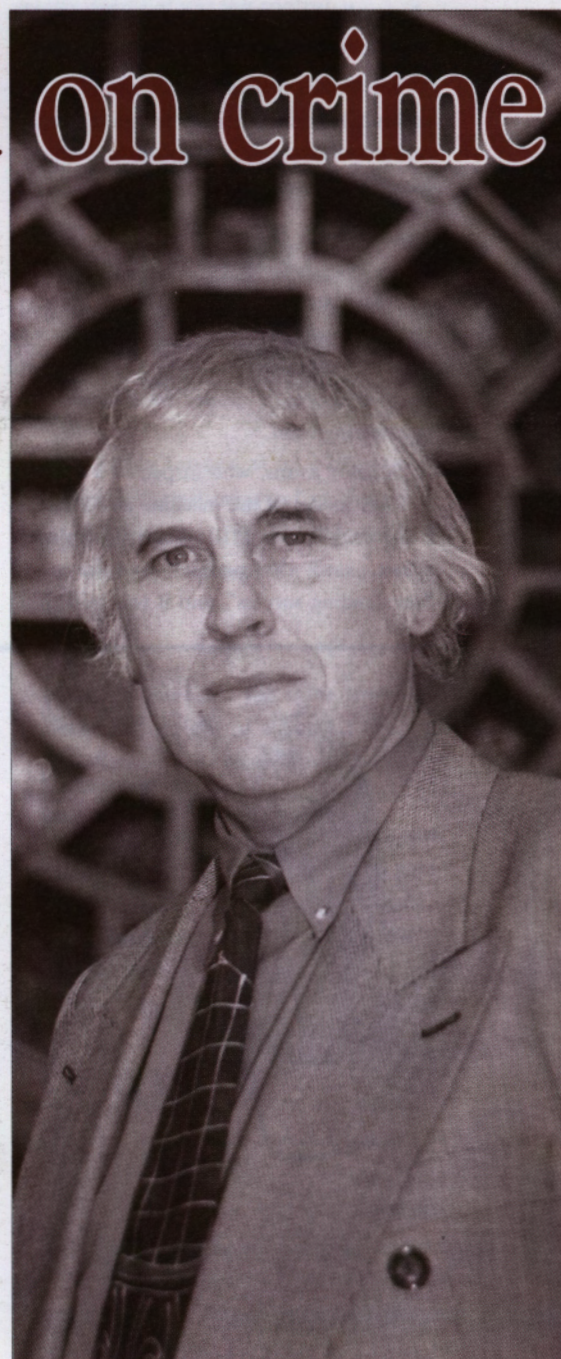
Although many patients were violent because of delusions and mental illness, they ceased to be a threat once their condition was brought under control. In most cases, this happened soon after they commenced treatment.

"Some do remain mentally ill and therefore potentially violent," he added. "But that violence is driven by their delusions and their morbid preoccupations, and the most frequent objects of these delusions are people who have a close relationship with them.

"They are not the sort of people who are going to randomly attack others in the street."

Researchers at the Institute for Forensic Psychiatry will investigate the contribution of certain mental disorders towards violent behaviour, and whether it is possible to predict which people might become dangerous.

*Continued on Montage 2*





## NOW & THEN

### 25 Years Ago

In the current welter of criticism directed against Universities there is a balance which is becoming thoroughly overweighted in one direction: namely the N.U.A.U.S. complaint that "some professors are lousy teachers", and that "teachers should be assessed every three years by staff and students to make sure they are doing their jobs properly".

N.U.A.U.S. also appears to be operating on the current myth that "the lectures are the course". They are not – and hence, are not compulsory in most universities. The syllabus plus the textbook plus references plus preliminary and related reading *supplemented* by lectures, are the course.

It is quite possible to pass, and pass well, without attending a single lecture, provided one maintains a personal contact with the lecturer or tutor.

### 15 Years Ago

The Minister for Resources and Energy, Senator Evans, has launched a campaign to inform Australian industry about a waste heat exchanger developed by a Monash-led engineering team.

Senator Evans, who inspected a demonstration model of the machine at Associated Pulp and Paper Mills Limited Ballarat plant, said the project had been an "outstanding success", and it was something

"with which the Commonwealth was proud to be associated".

### 5 Years Ago

The Monash Orientation Scheme for Aborigines (MOSA) is about to embark on its biggest recruitment drive since the program was established in 1984.

MOSA recruitment officer, Richard Jameson, will leave Monash early next month to visit about 20 Aboriginal communities along the Cape York Peninsula and Torres Strait Islands.

According to Mr Jameson his mission is twofold: to speak to the community elders about the benefits of tertiary education for their people; and to promote MOSA as the most unique education program for Aborigines in Australia.

### This Month Last Year

A Monash University mechanical engineer may have saved taxpayers more than \$100 million by developing technology to strengthen the F-111's famous swing wing.

The reinforcement technique, the result of 15 years' research into epoxy composite materials by Monash's Professor Rhys Jones and Dr Alan Baker, from the Defence Science and Technology Organisation, means that the fleet of 20 F-111's will remain the linchpin of Australia's air defence into the next century.

## A mind on crime

*From Montage 1*

Professor Mullen said there would also be a focus on research into the management and treatment of sex offenders, as well as emphasis on the needs of victims of violence and abuse.

A major aim will be to make the institute secure without creating a prison-like environment. "We want to avoid that custodian-style environment in which people are managed for a set period of time and then released back into the community without proper supervision and care."

Professor Mullen said he found forensic psychiatry to be the most interesting and challenging psychiatric field in which to work.

"Because the patients I deal with are unattractive to most mental health professionals, they often haven't had much effective clinical input before. So I can do a lot for them relatively easily."

Professor Mullen has been dealing with patients with severe mental disorders and violent crime records for the past 15 years.

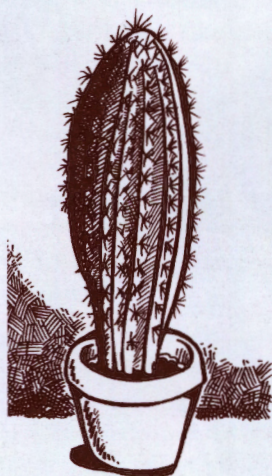
In that time, he has been assaulted once and placed in threatening situations on rare occasions.

He felt far more threatened in an earlier job as a casualty ward doctor in a busy London hospital, where he was assaulted on several occasions and threatened virtually every night.

"There is an image of the patients we deal with in forensics as all being mad axe-murderers who rush around randomly killing and maiming if given half the chance.

"People think we often deal only with the Hannibal Lecters of society, but of course that isn't the reality."

BY SUE HOBBS



# Spike

disappeared leaving our startled man pacing the foyer, wondering whether or not she would return. She did.

### The good ole days

Pharmacy College can be said to be taking a pissant approach to its collection and display of significant historical memorabilia. Taking pride of place in the foyer display of mortar and pestles, cut crystal chemical jars and finely forged instruments is a magnificent porcelain bedpan.

### Basic rule of thumb

There were perplexed looks all round recently when one of our international visitors kept staring at the door frames in K building on Caulfield campus. He couldn't decide if it was his eyes, the result of an earth tremor or misguided architecture which made all the doors, frames and walls appear crooked. See for yourself.

### Caught napping?

One of our intrepid transportologists was left holding the baby – literally – at a recent graduation ceremony. Mum handed over her son of about six months and promptly

## MONTAGE

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# Relics bring new life to ancient dance

Monash honorary Fellow Tara Rajkumar was overwhelmed with the discovery she made in one of the boxes in a back room of the Music department.

She found a collection of relics from the life of Louise Lightfoot, a renowned Australian dancer with whom she felt a deep affinity.

While Ms Rajkumar has been internationally recognised for taking ancient temple dancing from near obscurity in India to the international stage, she said it was Ms Lightfoot who began the revival of the tradition in the 1930s.

Ms Rajkumar is preparing a performance based on the life of Louise Lightfoot for the opening night of the Performing Arts Centre later this year, combining dance, music, mime, script and an installation.

The installation, or "activated archival material", will "encapsulate the life of Louise Lightfoot" and include a number of the relics Ms Rajkumar found, such as costumes, diary entries, plans for stage sets, music on tape, and film.

An installation is a contemporary artform that has only recently been introduced to theatre. It uses objects in a creative way to add an extra dimension to a performance.

Ms Rajkumar feels her life somehow parallels that of Ms Lightfoot. While Ms Lightfoot went to live in India and revived temple dancing, Ms Rajkumar has travelled from India and spread the ancient tradition in the outside world.

Both women were immigrants, balancing traditional customs and the expectations of a new culture. While Ms Lightfoot lived in India and wore a sari and a dot on her forehead, Ms Rajkumar has lived in Britain, Indonesia and Australia and performed ancient dance for the Western world.

The performance at Monash will reflect the similarities and contrasts in the two women's lives.

Ms Rajkumar said three time zones would be portrayed: the present and future, represented by her own life; the past, represented by the life of Louise Lightfoot; and eternity, represented by the continuity of temple dancing through time and "the perfection we all seek".

Contemporary music with Indian and Indonesian overtones is being specially composed for the performance.

Temple dancing, which has its origins in second-century Asia, was banned under British rule in India and had degenerated to the point where it was performed by prostitutes in a provocative way to attract clients.

Ms Rajkumar said the tradition "deteriorated completely, first under the Mughads and then under the British who did not recognise Indian culture".

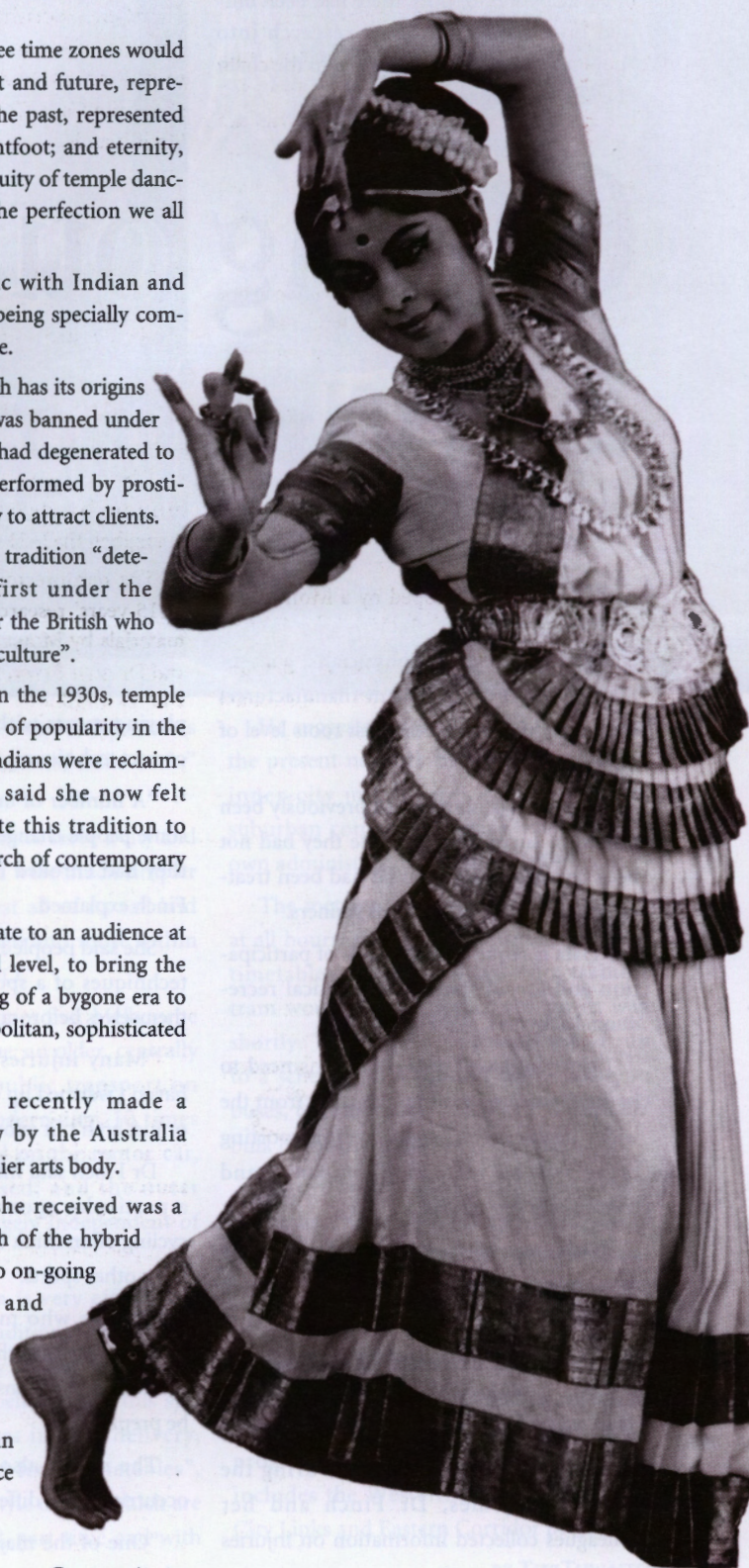
After it was revived in the 1930s, temple dancing enjoyed a period of popularity in the 1950s and 1960s when Indians were reclaiming their culture. She said she now felt an urge to communicate this tradition to modern Australia "in search of contemporary performance idiom".

"I want to communicate to an audience at a very high professional level, to bring the essence of temple dancing of a bygone era to the theatre and a cosmopolitan, sophisticated audience," she said.

Ms Rajkumar was recently made a Choreographic Fellow by the Australia Council, Australia's premier arts body.

She said the grant she received was a recognition of the growth of the hybrid arts and a commitment to on-going course development and research into the area.

She is currently teaching classical Indian dance and is involved in the development of dance studies at Monash.



BY GEORGIE ALLEN



In an effort to promote safety in sport, VicHealth and the Australian Sports Commission have enlisted Monash University's Accident Research Centre to establish where and how sports injuries are occurring.

It is estimated that sports injuries cost the nation a staggering \$1 billion per year.

The centre's initial report found that while Australia had one of the highest rates of participation in sport, there had been limited injury surveillance or research into "potential points of intervention in the chain of events leading to injury".

# Giving our bodies a sporting chance

Report co-author Dr Caroline Finch said sports administrators, trainers, sports medicine professionals and physicians, government and sports equipment manufacturers should be involved at the grass roots level of injury surveillance.

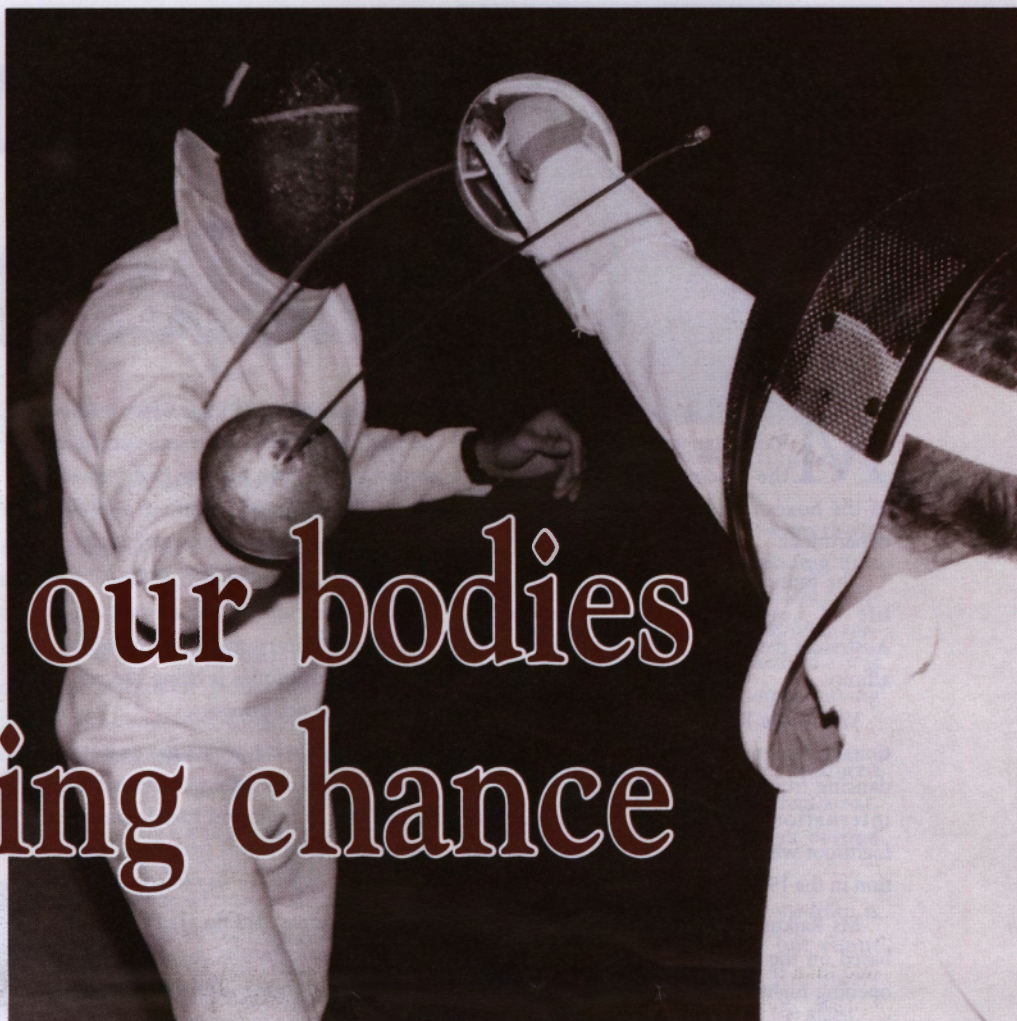
Many sports injuries had previously been missed in surveillance because they had not been considered serious and had been treated at pharmacies or by sports trainers.

"Data is required at all levels of participation and for all sports and physical recreational activities," Dr Finch said.

"Hospital-based data collections need to be supplemented with information from the wider health sector, sports sector, sporting organisations, insurance companies and community surveys.

"Data from all these areas will contribute to monitoring and describing the magnitude of the sports injury problem in this country."

As a result of the report, an injury surveillance project undertaken after the report was at the 1995 World Police and Fire Games held in Melbourne recently. During the week-long games, Dr Finch and her colleagues collected information on injuries sustained by competitors.



She found that some competitors were playing sports without being aware of the correct techniques.

"A number of injuries were caused when some people changed from playing the sport they had enrolled in to another sport," Dr Finch explained.

She said people needed to be aware of the techniques of a sport and should prepare themselves before commencing play.

"Many injuries occur because people haven't warmed up or stretched for the sport or just aren't fit enough for that activity."

Dr Finch said many people who are fit in a particular sport such as swimming or cycling often think their fitness transfers easily to other sports.

"People who move from one sport to another may find themselves using different motions and actions for which they may not be prepared."

The report also looked at the injuries occurring from different sports.

"One of the major things that came out of the report was that we can't easily

determine which sports are the most commonly associated with injury," she said. "But we can say which sports and recreational activities have the highest number of hospital presentations.

"For example, more Victorian adults present at a hospital emergency department with Australian Rules football injuries than anything else, but that doesn't necessarily mean it is a more injury-prone sport than other adult sports. It may just mean that 10 times more adults play football than any other sport. More specific data is needed to clarify this."

Dr Finch is currently undertaking a sports injury counter-measures review, funded by the Victorian Government's Department of Sport and Recreation, which will look at the full range of strategies available to prevent sports injuries.

Major gains in sports injury prevention are expected to include personal protective equipment, modifications to rules and improvements to sporting facilities.

By JULIET RYAN



# A future set in plastic

Monash researchers are working with Australian and American companies to develop methods to strengthen bridges, buildings and other forms of civil infrastructure with plastic composites.

Chairman of the Department of Mechanical Engineering, Professor Rhys Jones, believes plastic composites have the potential to become the building materials of the 21st century.

While many people might wonder at the concept of driving plastic cars, flying in plastic aeroplanes, sailing in plastic ships and driving over plastic bridges, Professor Jones says those days are not far away.

And contrary to what cynics might say, he believes that using these advanced plastics as building materials will be much kinder to the environment.

He is quick to point out that the new plastics technology is much more sophisticated than that used to create the multitude of plastic household and office products we use daily.

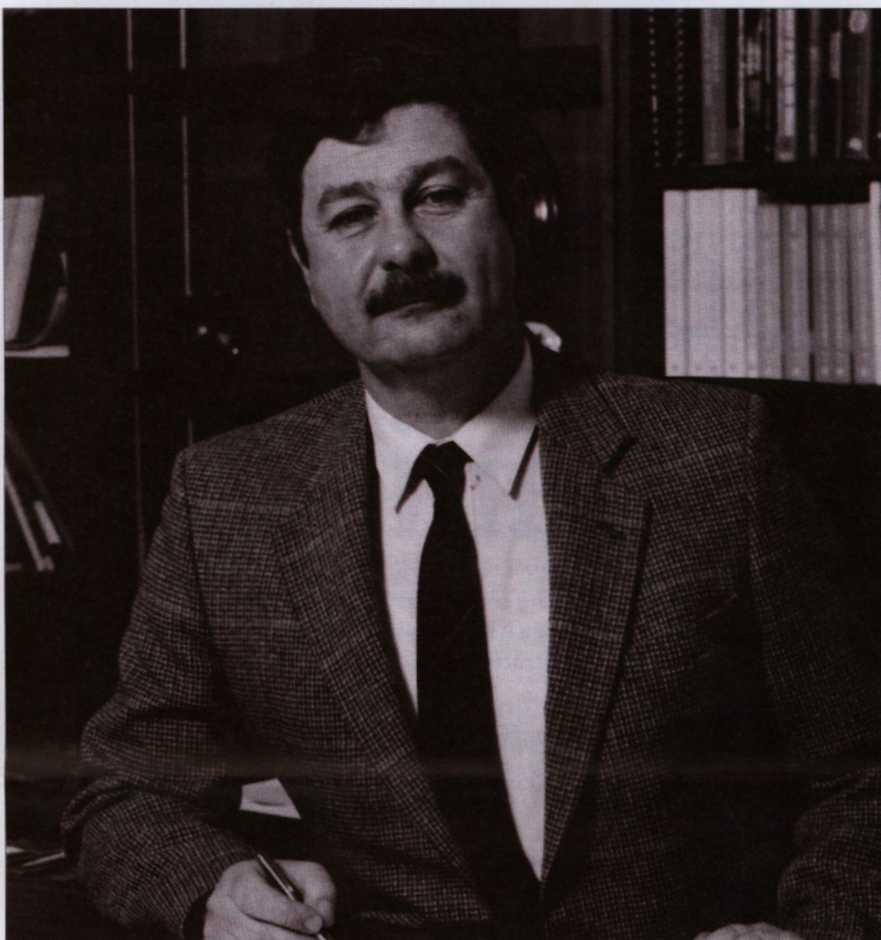
"We are referring to advanced plastic composite materials," Professor Jones said. "We already have the technology; we just need Australian designers and manufacturers with the skill and courage to develop the products."

He said Monash research into advanced composites had shown they were more durable than steel and concrete, with the added benefits of being low-cost, lightweight, energy-absorbent and less corrosive.

He defined a composite as "generally a relatively stiff fibre in a relatively soft resin or matrix". The substance which holds the fibre in place is often a polymer. Fibreglass, for example, is a well-known plastic composite, comprising fibre in a polymer resin.

Composite building materials have been used throughout history. "One very good example is the mud brick, which the Egyptians made by mixing straw and mud," he said. "Wood and paper are also composites, as they are fibre-reinforced materials."

Professor Jones was previously head of structural engineering with the Department of Defence before joining Monash two years ago.



*Professor Rhys Jones believes plastic composites are the building materials of the future.*

He said advanced composites technology was developed primarily for military applications, including the repair of high-performance fighter aircraft.

Aside from military uses, the civil applications for the new composites technology are immense.

Advanced composite 'wraps', for example, can be applied to buildings, freeway bridges and other structures in earthquake-prone regions to make them more resistant to damage.

"What generally happens to a steel-reinforced concrete building or bridge during an earthquake is that the concrete cracks and falls out of the structure. The steel bars inside the concrete are left unsupported; they then buckle and collapse and the structure falls down," Professor Jones explained.

"What we have found at Monash is that simple plastic 'wraps' around such concrete

structures can increase their strength more than four-fold."

These 'wraps' are often only a few millimetres thick and consist of a fibreglass-graphite composite.

The concrete inside a 'wrapped' structure is still likely to crack in an earthquake, but the covering holds the bulk together, protecting the steel supports and preventing the overall structure from collapsing.

"You only have to stop one freeway from collapsing and save one life, and it's all worthwhile," Professor Jones said.

He stressed that advanced composites were not direct competitors to concrete or steel. "They are synergistic, because composites will mostly be used to increase the capabilities of the other materials, rather than replace them."

A 1991 report from the US Secretary of Transport stated that almost 40 per cent of

*Continued on Montage 11*



# Monash to host major economic development organisation



*Professor Lauchlan Chipman: Working towards new economic structures in Gippsland.*

**M**onash University is playing a key role in the economic restructuring of the Gippsland region.

Deputy Prime Minister Mr Brian Howe recently announced that a new Regional Economic Development Organisation (REDO) for the greater Gippsland region would be based at the university's Gippsland campus.

The decision followed recommendations from a working party, chaired by Monash's deputy vice-chancellor Professor Lauchlan Chipman, which consulted locally on the renewal of Gippsland's economic and social structures.

Vice-chancellor Professor Mal Logan said REDO would help local government attract major investments to the area.

The new organisation would also be active in establishing improved industry networks and regional infrastructure as well as providing a united focus in marketing Gippsland's assets.

"With the Gippsland Research Information Bank, the Centre for Gippsland Studies and a developing research profile, Monash's Gippsland campus is well placed to host the REDO secretariat," Professor Chipman said. "REDO will also have access to the university's inter-campus and international electronic network."

With key energy industries in the area being restructured in preparation for the

state government's privatisation of the SEC, thousands of jobs have recently been lost in the Gippsland region. Many jobs have also been lost through the recent move of the ESSO/BHP Sale headquarters to Melbourne.

In addition, 24 local government agencies have been amalgamated to create six new councils based at Lakes Entrance, Sale, Latrobe Valley, Warragul, Leongatha and Wonthaggi.

Professor Chipman said the Gippsland economy was being forced to adjust to national and global forces and that it was important that the region's key institutions thought globally while acting on a regional and sub-regional basis.

He said recent moves had propelled Gippsland from the local to the national and international stage. Gippsland International had been formed to promote the region's engineering services on a global basis. Similarly, Energy Education Australia, a company owned by Monash University, the Central Gippsland College of TAFE and the Gippsland Group Training Company, was now selling education and training services for the energy industry both within Australia and overseas.

Monash University has also been involved in these moves with Professor Brendon Parker, a board member of Gippsland International, and Professor

Barry Dunstan, who heads Energy Education Australia.

As well, Monash's Distance Education Centre, which is also administered from the Gippsland campus, has students based in 54 countries and offers specific programs in Hong Kong, Singapore and Kuala Lumpur.

And head of the Gippsland School of Business, Professor John Anderson, has recently been appointed to chair the Gippsland Area Consultative Committee by the Minister for Employment, Education and Training, Mr Simon Crean.

The committee will play a key role in implementing the Federal Government's Working Nation initiative and aims to generate job training initiatives and an employment development strategy for regional economic growth. The committee will work closely with REDO.

Mr Howe said that in the emerging global markets, regions rather than towns would be significant.

"What matters is that energetic regions with a clear focus and a well-defined profile will be the winners in the 21st-century markets," he said.

"Monash University, which is one of the key regional organisations in Gippsland, will play an important role in this process by harnessing advances in communication technology to improve access to information, research and learning."

BY MURRAY HOMES



# Working for welfare

Monash staff and students are working to re-open the poverty debate after a recent study revealed a dramatic increase in the number of Frankston people relying on emergency welfare.

A survey of people receiving emergency relief assistance from the Frankston Community Support and Information Centre last October found that 94 per cent of recipients had needed 'temporary' help on multiple occasions (up to seven times) during the previous 12 months.

In a similar study in 1989, only 14 per cent of recipients had needed help more than once a year.

Centre chairperson and Monash social work lecturer Dr John Murphy said the results were extremely concerning.

"We are dealing with more clients more frequently, despite the fact that there are more agencies in the area than there were five years ago," he said.

The centre, together with a group of Monash final-year social work students, is planning to tackle the problem by organising a forum this month titled 'Emergency Relief - Alternative Strategies'.

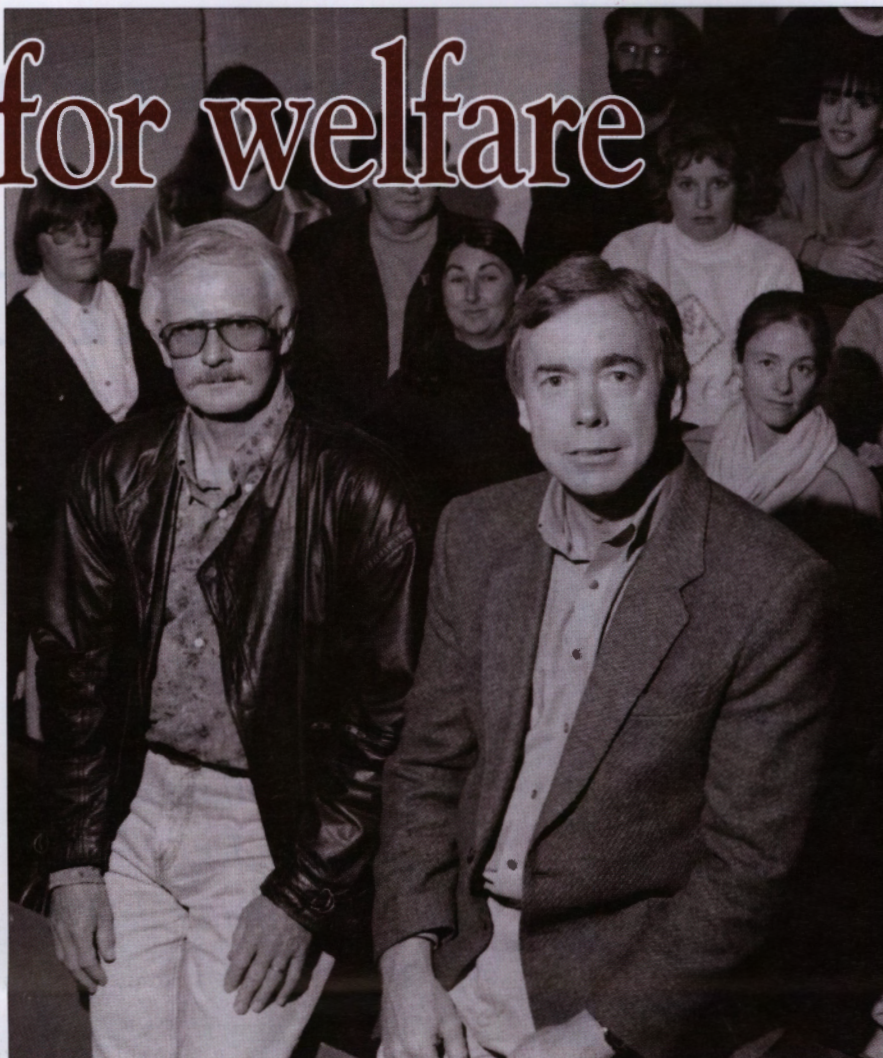
Dr Murphy said the aim was to highlight evidence that social security allowances were insufficient as a main source of long-term income and to identify ways of extending help beyond a welfare handout.

Speakers will include Australia's human rights commissioner Brian Burdekin, federal, state and local politicians, as well as representatives from the Victorian Council of Social Services, the Brotherhood of St Lawrence, the business sector and the Frankston community.

"An effective welfare policy needs to be coordinated at individual, community and political levels," Dr Murphy said.

"At a political level, there is the power to increase allowances and create easier access to government housing, but providing more money is not the total solution," he said.

The centre already offers emergency relief and personal and budget counselling,



Social work lecturers Mr Max Liddell and Dr John Murphy are working with their students to find new methods of poverty relief.

but welfare workers believe there is scope to make better use of community resources.

Dr Murphy urged anybody working for poverty relief in other areas of the state to come to the forum to exchange ideas and strategies, as he believes there may be ways of pooling and sharing resources.

He named the growth of long-term unemployment in the Frankston area as the major cause of the problem.

"Over the last five years unemployed people, particularly long-term unemployed, have replaced single parents as the major group seeking financial assistance," he said.

"Traditionally, relatives and friends have been an alternative to welfare agencies for financial support, but the growth in long-term unemployment means there is often no-one in a position to offer help."

Most emergency assistance is given in the form of food or food vouchers, but the high demand on the centre's resources means it can supply only enough to sustain

a family for a couple of days every two months.

"Having to rely on low benefits on a long-term basis makes it difficult, and frequently impossible, to afford daily living expenses. It's common for people to give up meals if they suddenly get an unexpected bill for something like fixing a washing machine."

He said universities should be regarded as part of the wider community, and the forum was one example of how Monash resources could be used for mutual benefit.

"The forum isn't like writing another essay for a text book. This is a real project for a real community with real problems," Dr Murphy said.

The forum will be at the Frankston Cultural Centre on Thursday 25 May. For further details, contact Dr Murphy on (03) 990 54291, or the Frankston Community Support and Information Centre on (03) 9784 1971.

BY GARY SPINK





# Rediscovering the ancient past

*Recent archaeological findings have challenged the belief of many historians that ancient Egyptian religious traditions died out under Greek and Roman rule. Gary Spink reports.*

An on-going archaeological dig involving Monash academics and students has uncovered evidence that Egyptian religious and artistic culture survived and prospered virtually throughout Greek and Roman occupation.

And these latest discoveries may mean art historians will have to revise widely accepted dating methods for certain styles of Roman paintings.

The dig at the Egyptian oasis of Dakhleh, 800 kilometres south of Cairo, has become an annual pilgrimage for Dr Colin Hope, a senior lecturer in Monash's Department of Greek, Roman and Egyptian Studies.

Dr Hope's work at the Roman-period town site is part of one of the biggest archaeological projects in Egypt (the Dakhleh Oasis Project deals with a 60 km x 40 km area).

He has led excavations at Dakhleh since 1986, and this year his team of 18 included Monash undergraduate and postgraduate students who worked alongside international experts and academics from other Australian universities.

His team has previously uncovered the most important collection of ancient Greek language text found in the last 60 years. Other significant discoveries include 11 mummies, plaster sculptures, jewellery, ceramic fragments, and an exciting find last year of a small second-century painting of the Egyptian goddess Isis.

The presence of Isis, found in what was once a huge temple complex dedicated to the local god Tutu, was further proof of religious diversity and tolerance in ancient Egypt.

But the discovery between December 1994 and February this year that a 'birth house' within the temple was dedicated to Tutu is even more significant.

Combined with evidence from other discoveries, it shows Egyptian religion continued to evolve with the creation of new mythology throughout the first and second centuries, and Egyptians continued to worship their traditional gods until at least the middle of the fourth century AD.

Egyptian religious traditions were already known to have continued under Greek and Roman rule, but Dr Hope believes his team may have uncovered

evidence of some of its last evolution and practices.

In ancient Egyptian religion, kings were thought to be representations of the god Horus, the son of Isis.

Birth houses were built to celebrate the birth of a new king, his identity with Horus and therefore the maintenance of divine world order.

But replacing Horus with Tutu meant local priests raised the deity's status and altered Egyptian mythology to suit the regional cult. Rather than being a patron of kingship, Tutu had previously been known as a master of demons, capable of warding off evil.

Dr Hope said the Dakhleh temple was the only one known to be dedicated to Tutu, and he believed it was probably the last birth house built in Egypt.

The birth house is one of four mud brick structures attached to the main temple. Meticulous excavation revealed the remains of five-metre-high wall paintings depicting the birth of Tutu amid other religious scenes.

The Egyptian religious images are framed by panels of classical Roman motifs at the top and bottom of the walls.

Some of the classical paintings were done in a style that, until now, had been associated with the third and fourth centuries AD, but accompanying text shows the art was completed up to 200 years earlier.

"People investigating this style of painting will have to revise their dating because of our textual and archaeological evidence," Dr Hope said.

Texts from the temple also show that it was still operating in 330 AD. This means that 700 years of imposed foreign culture from the Greek and Roman empires had failed to destroy indigenous Egyptian beliefs in this region.



"Instead of signs of degeneration, which you might expect, what we have at Dakhleh is a continuation of lively religious traditions," Dr Hope said.

"It's incredible to think that Egyptian indigenous traditions were not only maintained but also changing and developing in a tenacious manner beyond Roman conquest and until Christianity took hold."

The entire settlement, including the temple, seems to have been abandoned towards the end of the fourth century.

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*His team found later evidence of squatters living in the temple, including ancient graffiti stating: "George and his friend Kyris spent the night (here) with their geese."*

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Dr Hope believed this was probably due to problems associated with a minor climate change or possible overuse of the oasis water for irrigation, leading to salinity.

His team found later evidence of squatters living in the temple, including ancient graffiti stating: "George and his friend Kyris spent the night (here) with their geese."

George and Kyris had dated their historical document with day and month, but had neglected to mention the year. Dr Hope suggested modern graffiti artists fully date their work for the sake of future archaeologists.

Ten centimetres of animal droppings on the floor also suggest it was a popular shelter for camels, donkeys and goats.

Sections of the walls had been defaced by pagan or Christian vandals, but Dr Hope said they were still "very fine quality examples" of first and second century Egyptian art.

The birth house's barrel-vaulted ceiling collapsed centuries ago, leaving Dr Hope's team with the painstaking task of lifting the mud brick blocks and carefully collecting pieces of painted plaster.

It has proved too difficult to restore most of the plaster to the walls, but much can be displayed in a museum.

All pieces are conserved, cleaned and photographed. An epigrapher traces all of the decoration to produce a complete line-drawing record of every scene.

It is an ultimate goal to produce a computer simulation of the monument in its original state.

Most of the artifacts from Dakhleh are crammed into on-site storerooms, while better pieces are placed in museums by local authorities.

Australian Research Council funding for the excavation of \$49,000 a year has been guaranteed until 1997, but Dr Hope knows this falls far short of what is needed to complete the project, and he is seeking private donations to speed up the process.

"We have only just exposed the top of the other three mud brick structures attached to the temple, and I believe what we have found so far justifies the establishment of a major conservation project."

All of these areas are lined with more Roman wall paintings, and preliminary

investigations have already uncovered a dismantled gilded-wood shrine stored in a wall cupboard, and a 300 kilogram pile of discarded ceramic wine containers.

But it's not just the promise of more historical artifacts that motivates Dr Hope to expand the dig.

"With enough money, we could also use the site to train students in field conservation techniques," he said.

Other Monash faculties have also expressed interest in the site, with Dr Neil Hallum, associate professor in the Department of Ecology and Evolutionary Biology, visiting Dakhleh this year to study remains of ancient cereal crops as part of his investigations of genetic evolution.

"This is the most important excavation of a Greek and Roman site in Egypt for the last 50 years," Dr Hope said.

"It's like piecing together a historical jigsaw puzzle. Each year in this type of excavation work can change your concept of what happened."



*Secrets revealed at the Dakhleh temple dig could change our understanding of ancient art and religion.*



*French conservator Laurence Blondeaux works on one of the temple paintings.*



# Weed control is fertile ground for research



Everyone remembers the eerie February afternoon when Melbourne's skies darkened as two million tons of red topsoil blew over the city.

And while it was not the Armageddon many imagined, the 1983 soil storm exposed the very real threat of permanent damage to the fragile soils of Australia's broad acre farms through bad farming practices.

Harmful farming methods, such as the over-use of agricultural chemicals and the resulting toxicity and erosion of topsoil, are currently being investigated by Monash researchers, with international success.

Three Monash chemists – Professor Roy Jackson, Dr Ian McKinnon and Dr Brian Hawke – are leading a team which is developing ways to reduce the risk of Australia's most fertile soil simply "blowing away with the wind".

"At present, common farming practices certainly exacerbate the risks to Australia's fragile topsoils," Professor Jackson said.

Professor Jackson said the team's work was an excellent example of applied research, with academics collaborating with government and private enterprise to develop ecologically sound and commercially lucrative products.

The Monash scientists are working with Daratech, the commercial arm of the Victorian Department of Agriculture, and Melbourne-based agricultural chemical company NuFarm to produce more effective, ecologically sound weed-killers for farming use.

"Daratech approached us because they had the expertise in biological science but also needed chemists, and we were happy to help," Professor Jackson said.

The team has already developed one product which is winning market support as a cost-effective, ecologically friendly weed-killer for broad acre wheat farming.

The product, marketed by NuFarm, is earning royalties for Monash and demonstrating the team's research capacity. "It has

established our credentials as a research organisation capable of creating commercially viable products," Professor Jackson said.

The team is looking at the modern farming practice of weed control through spraying fields and ploughing chemicals into the soil.

"It's a cheap but inefficient method, with up to 40 per cent of the applied chemicals lost through evaporation," Professor Jackson said.

"Farmers compensate for this by over-use, which can lead to saturation of soils with enough chemicals to cause crop damage. Introducing the chemical by ploughing, on the other hand, is expensive and damages the soil, leading it to break up and, in some cases, blow away."

To reduce this problem, the Monash team incorporated the weed retardant chemical Trifluralin into an inert chemical matrix, which slows its release into the



atmosphere, making it possible to cut down the amount sprayed.

Although the team believes the NuFarm product does not offer a complete solution, it is confident that with \$2 million in research funding from NuFarm and the Commonwealth Department of Industry Science and Technology, it can produce an agricultural weed killer which will do the job with lower environmental costs. And in the longer term, it hopes to develop a similar product for corn fields.

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*"The method kills weeds, minimises chemical release into the atmosphere and water table, and reduces exposure of farmers to chemicals."*

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The team believes it is well on the way to developing a method of reducing both the evaporation rate of the active ingredients and the amount of chemicals leached into ground water.

Traditionally, weed killers are supplied as liquid emulsifiable concentrates, which farmers mix into a spray. The dangers include the possibility of farmers spilling chemicals over themselves and into the soil and residue from abandoned chemical drums seeping into the water table.

Experts believe agricultural chemicals should be supplied as water dispersal powder and sprayed using existing equipment.

But according to Dr Hawkett, the two common weed control chemicals used in grains, cereals and other crops – Trifluralin and Pendimethalin – have low melting points in solid form, making it difficult to supply them to farmers as powders.

Dr McKinnon said they had already produced a Trifluralin powder which went a long way towards reaching these goals. "This is a development that both farmers and chemical companies will welcome, as government regulation on the use of organic solvents is tightening throughout the developed world," he said.

"They are most definitely viewed as environmental no-noes," Professor Jackson added.

It is also a research coup, solving a problem which has defeated some of the world's major chemical companies.

Previous researchers had followed the same approach but were defeated by the impact of heat on the chemicals. At 50° C, a summer temperature which can be quite common in farm sheds, the chemical in powder form solidifies making it impossible to spray onto fields. A \$20 million plant commissioned in the US to manufacture a Trifluralin powder was abandoned because it could not stop the chemical solidifying at high temperatures.

But the Monash team believes it has beaten the heat. In conjunction with Nufarm, the powder has passed field tests in both Australia and eight US states. The company has a pilot plant in 24-hour production at Laverton, outside Melbourne, to meet test market orders from North America.

The team's research has also made it possible for Nufarm to package the powder in water-soluble bags, ending the problem of empty chemical drums littering farms.

Dr McKinnon is confident that the powder will go into full commercial production.

"The method kills weeds, minimises chemical release into the atmosphere and water table, and reduces exposure of farmers to chemicals."

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*It is also a research coup, solving a problem which has defeated some of the world's major chemical companies.*

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But the team said it still had a long way to go to maximise the results of the research program.

The next challenge is to delay the release of the weed-killer into the soil. At this stage, the product kills weeds very quickly but still has a toxic impact on the crop and soil.

The team is now working to see if it can perfect a slow release system after spraying so that weeds are killed gradually and farmers reduce the damage to soils.

BY STEPHEN MATCHETT

## A future set in plastic

From Montage 5

the country's bridges were "structurally deficient or functionally obsolete". Governments worldwide are currently facing huge repair bills on infrastructure.

"In South Australia alone it is anticipated that by the year 2010 the entire state budget will be taken up in refurbishing corroded infrastructure," Professor Jones said.

He believed the increased use of composites was also in keeping with Australia's aims to reduce air pollution and create a 'greener' environment.

The material is lighter, meaning that cars, ships and aircraft built using composites will, theoretically, fly faster and use less fuel.

"One of the major environmental problems we face is pollution from car engines," he said.

"If you can expend less fuel, your car will give off fewer gases, and if the car is lighter in the first place it will use less fuel."

There is also a safety element, as composites are highly energy-absorbent and once incorporated into vehicle designs can increase the safety of passengers in collisions.

Professor Jones said that while there would always be a degree of conservatism and scepticism about using plastics technology, "new composite building materials will, if we can present innovative design, give Australia a chance to grab major international contracts".

"What's so good about Monash is that all these capabilities can be found in the one institution and are complemented by experimental test facilities that are rare outside the US and Europe.

"This makes the university a natural resource for the Asia Pacific region in the area of advanced composites."

BY SUE HOBBS



# An alternative history

The author of a recently published history of Melbourne's longest running progressive school attributes its success to respect for the child and the commitment of its founding teachers.

Dr Naomi White, senior lecturer in Monash University's Department of Anthropology and Sociology, was commissioned to write a history of Preshil on its 60th anniversary.

The school was established by Melbourne teacher Margaret Lyttle in the 1930s and run for 50 years by her niece, also called Margaret Lyttle, until she retired last year.

Dr White said the school owed much of its success to "two visionary, complex, powerful women" and their recognition that education should "foster intellectual development while also responding to the emotional and social needs of children".

Before founding Preshil, the first Miss Lyttle worked at schools where up to 70 children were lined up on benches and taught by rote learning, as well as at more progressive schools.

She then went into early retirement before three families asked her to continue teaching their children – which she did from

her own home in Kew.

The school, which grew to 80 students by the end of its first year, still remains at its original site at her Barkers Road home, with the garages and spare rooms turned into classrooms and the

garden used as a playground.

Dr White said the architecture of the school reflected its alternative education philosophy and contrasted with the "institutional" style of more conventional schools.

At Preshil, children of all ages play together rather than being divided into age groups and are encouraged to use the physical environment for their recreation. Dr White said it was typical for a Preshil student to be an adept tree-climber and cubby-house builder.

There is no marking system until the middle years of secondary schooling at Preshil; the school's philosophy is that children are motivated to learn through a commitment to acquire knowledge rather than through competition.

"Success is not determined by how well students perform in exams, but by how well they are able to contribute to the community, their self-confidence and knowledge of their own strengths."

Similarly, there is no competitive sport, and the students instead play games or participate in non-competitive sports such as gym.

Dr White said that while the school fostered intellectual development, it also placed a big emphasis on the child's emotional needs.

There was a focus on "support rather than punishment", and the students and teachers spent a lot of time discussing what was fair and how behaviour should be monitored.

Dr White said this approach was a lot more productive and dealt with behavioural problems more effectively than traditional punishments such as detentions.

While Preshil has survived and flourished since it was founded in the 1930s, Dr White said the school had experienced its fair share of difficult times, particularly during the conservative 1950s when rumours circulated Melbourne that Preshil was a communist school "where children hit their teachers".

Dr White spent two years writing the history, studying documents such as newspaper articles, school council minutes and annual reports, and interviewing about 80 parents, teachers and students.

She also sat in on classes and observed children in the playground to get a more personal perspective on the school.

Dr White said while writing the book she became fascinated with exploring the ways the past was reconstructed.

In the book she discusses the processes she used to piece together the story of Preshil.

## **School Matters: The Preshil Alternative in Education**

*By Naomi Rosh White*

*Published by Reed Books*

*RRP \$22.95*

## **Music Cultures in Contact: Convergences and Collisions**

*Edited by Margaret Kartomi and Stephen Blum*

*Published by Currency Press*

*RRP \$24.95*

*Music Cultures in Contact* looks at issues such as what happens when musicians from impinging cultures meet over an extended period of time, and when contact between impinging cultures results in clashes and when it results in a fruitful convergence.

Contributing authors look at music in Andean Ecuador, Australia, the Central Balkans, Fiji, India, Java, Italy, Malaysia, Papua Niugini, Russia, Ukraine, United States and Vietnam.

Professor Margaret Kartomi is head of the Music department at Monash University.

## **Management Ethics: Theory, Cases and Practice**

*By Gordon Clark and Elizabeth Prior Johnson*

*Published by Harper Educational Publishers*

*RRP \$39.95*

This book provides an introduction to management ethics for business and economics students.

It includes an introductory chapter on how to read and use case studies, an outline of the major philosophical positions on ethics, and original cases in mining, banking, insurance, medical technology, accountancy, public regulation and not-for-profit management.

Dr Elizabeth Prior Johnson is a senior lecturer in Monash's Philosophy department

and director of the Monash Institute of Ethics and Public Policy.

## **Henry Kendall: The Man and the Myths**

*By Michael Ackland*

*Published by Melbourne University Press*

*RRP \$49.95*

This is the first biography of Henry Kendall, renowned as one of Australia's finest colonial poets, to be published in the past 60 years.

It uses previously unpublished material to replace the popular image of Kendall as a melancholy poet of the Australian bush with a complex portrait of a robust, enigmatic and many-sided character.

Dr Michael Ackland is a senior lecturer in Monash University's English department.

*All books in this column can be purchased in the Monash University Bookshop, Clayton campus.*



# Transport takes a new route

**M**elbourne is a world leader in traffic management, according to Professor Ken Ogden of Monash University's Department of Civil Engineering.

In fact Professor Ogden, also of the Monash Transport Group, believes Melbourne has a good base from which to take advantage of new 'smart' transport technologies which will change the structure of cities throughout the world.

The future of Melbourne's transport systems are the subject of two recent papers by Professor Ogden, currently on secondment to the Victorian Department of Transport.

He outlines radical new systems that are emerging from the application of modern electronics and information technology to transport.

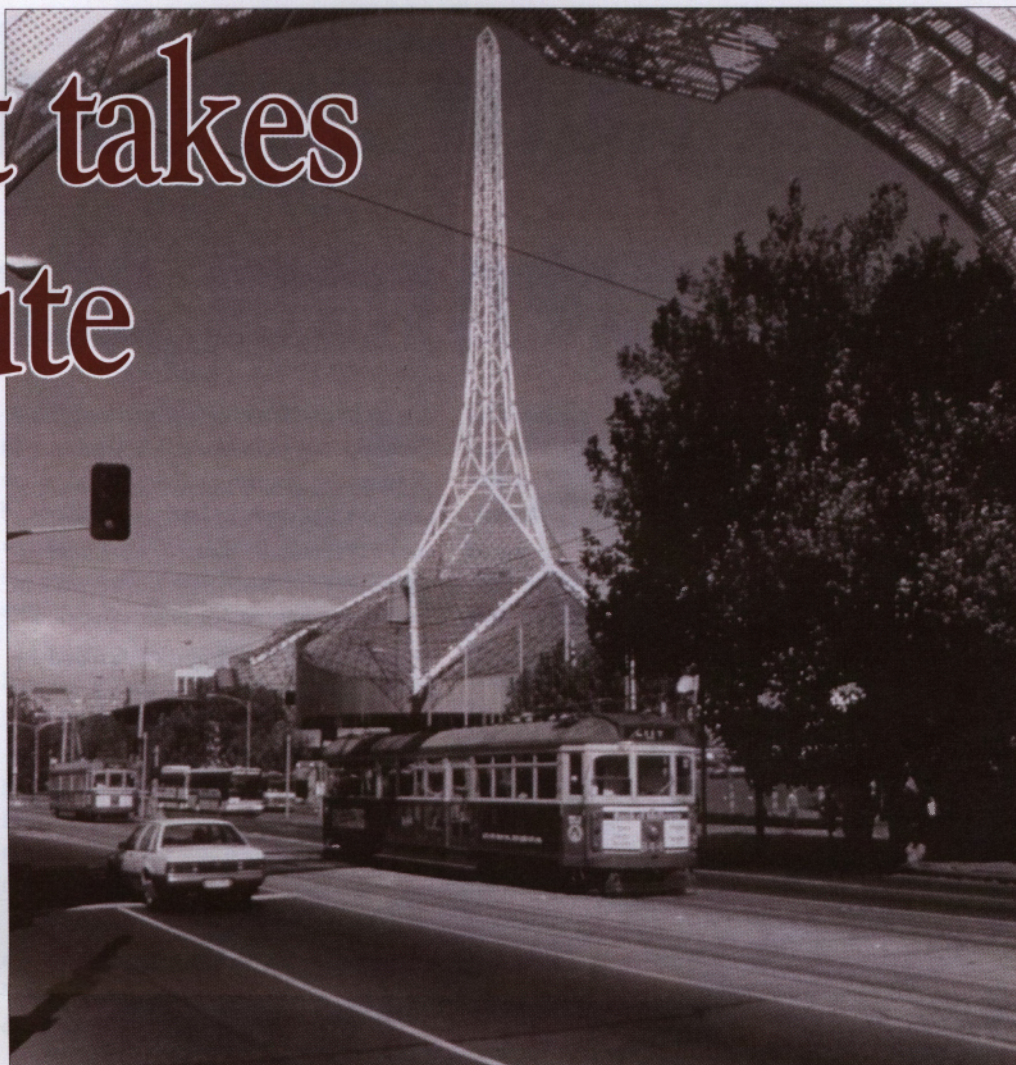
Some of these new technologies, such as computerised traffic control systems, are already in use in Australia. Every bus, tram and train in Melbourne is now monitored, and it will soon be possible to have accurate information about when the next vehicle will arrive at each stop in the system, Professor Ogden said.

Route navigation systems are being developed to measure the level of congestion on the roads, simulate alternatives and suggest the best route to motorists. And automatic tolls, with electronic monitors and cards with magnetic strips, will be introduced on Melbourne's roads in the near future.

Cars will be equipped with electronics to help drivers avoid crashes and with the ability to use automated guideways where driving would be controlled by computer.

However, Professor Ogden believes Melbourne does need to reorganise its public transport system to better suit the changing patterns of work and the development of the city.

"For such a low-density city, Melbourne has one of the most extensive fixed-rail



networks in the world, with 332 kilometres of tram and 336 kilometres of train track," he said.

"However, it was built to serve a city and a pattern of work which were much simpler than today, with almost all of its rail laid more than 100 years ago and most within 10 kilometres of the GPO."

Professor Ogden argues that Melbourne is really two cities in one: an older, centrally focused city rich in public transport on which a sprawling modern city, 10 times as extensive and based on the motor car, has been superimposed; and the outer suburbs, which are largely independent of the inner city.

The current system is very efficient at moving people with traditional nine-to-five jobs in the central city to and from work. But Professor Ogden believes that this system, which "specialises in bulk delivery, single-line routes and fixed timetables", does not suit the new style of jobs which are more likely to be local, part-time and with flexible hours.

He suggests building on the strengths of the present network by splitting it into an inner-city metro service and an outer-suburban commuter service, each with its own administration and distinctive livery.

The metro service would run frequently at all hours, so that people would not need timetables. Those who missed a train or tram would know another was on its way shortly. The suburban network would run to a schedule and connect conveniently to buses, taxis and cars, which would form the bulk of the outer transport system.

In order to build on Melbourne's strengths – a curfew-free airport with lots of capacity for expansion, the busiest container port in the southern hemisphere and first-class rail terminals – the city needed to build good links between them and its industrial areas, Professor Ogden said. This process had started in the late 1980s with a program of freeway construction, which includes the Western Ring Road and the City Links and Eastern Corridor projects.

BY TIM THWAITES



# Honouring our delinquent angels

**M**ystery and uncertainty may be central to the creation of his pieces, but ceramist Owen Rye has a strong sense of where his art is headed.

He will be among a select group of Australian artists taking part in the 1995 ceramics exhibition at Faenza in Italy next September, held in conjunction with the biennial ceramics competition organised by the city's International Museum of Ceramics.

And this year, the tiny northern Italian town is honouring Australian art, with an exhibition theme titled 'Delinquent Angel:

Australian Historical, Aboriginal and Contemporary Ceramics'.

Dr Rye, a senior lecturer in ceramics at Monash University's Gippsland campus, was one of 13 ceramists chosen by exhibition co-organisers Craft Australia to display work in the contemporary section of the exhibition.

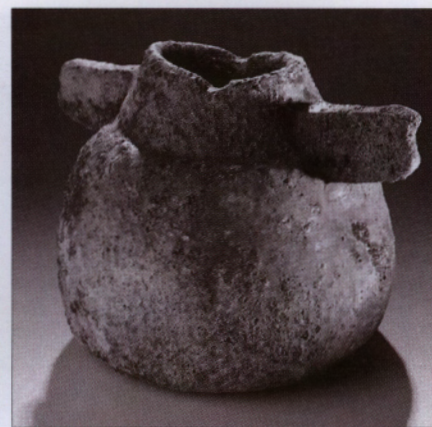
"The festival is highly regarded by ceramists, and to be chosen for this exhibition is an honour akin to being selected for the Australian cricket team", he said. "The numbers are about the same."

As one of Italy's oldest centres of ceramics, Faenza holds special appeal to Dr Rye, who worked for 10 years as an archaeologist excavating ancient pottery sites in Pakistan and Israel.

"I was very interested in the origins of my artistry, and archaeology allowed me to travel the world," he said.

Dr Rye's ceramics reflect his interest in ancient ceramic traditions, especially the simple high-firing techniques that developed throughout Asia in past centuries.

He described his work as "a continuous process of uncertainty" and said he based much of his approach on the medieval Japanese model



of 'anagama' – the wood-firing of clay vessels.

"This traditional Japanese method, which uses a simple kiln with sloping tunnels, is the most viable of the ancient traditions," he said. "But to me the art of anagama is much more than just a method – it is a total aesthetic artform incorporating materials, fire and intuition."

He said the surfaces of the pots produced in the ash of the wood-fired kiln had a natural quality – a feeling of an event beyond human control.

"The nature of the anagama medium is not about clarity or certainty but about mysteries not easily understood. This uncertainty has considerable appeal to the artist.

"By denying perfection, we can accept the virtues of imperfection. The concept of the flaw, the accident, is a concept involving acceptance rather than control."

Dr Rye's ceramics, which he prefers not to classify either as functional or decorative, include jars, bottles, bowls, vases and vessels of many shapes and sizes.

The raw pots are wood-fired in a kiln for four or five days, where ash reacts with the clay to create unpredictable shapes and surface glazes which have "a very ancient look".

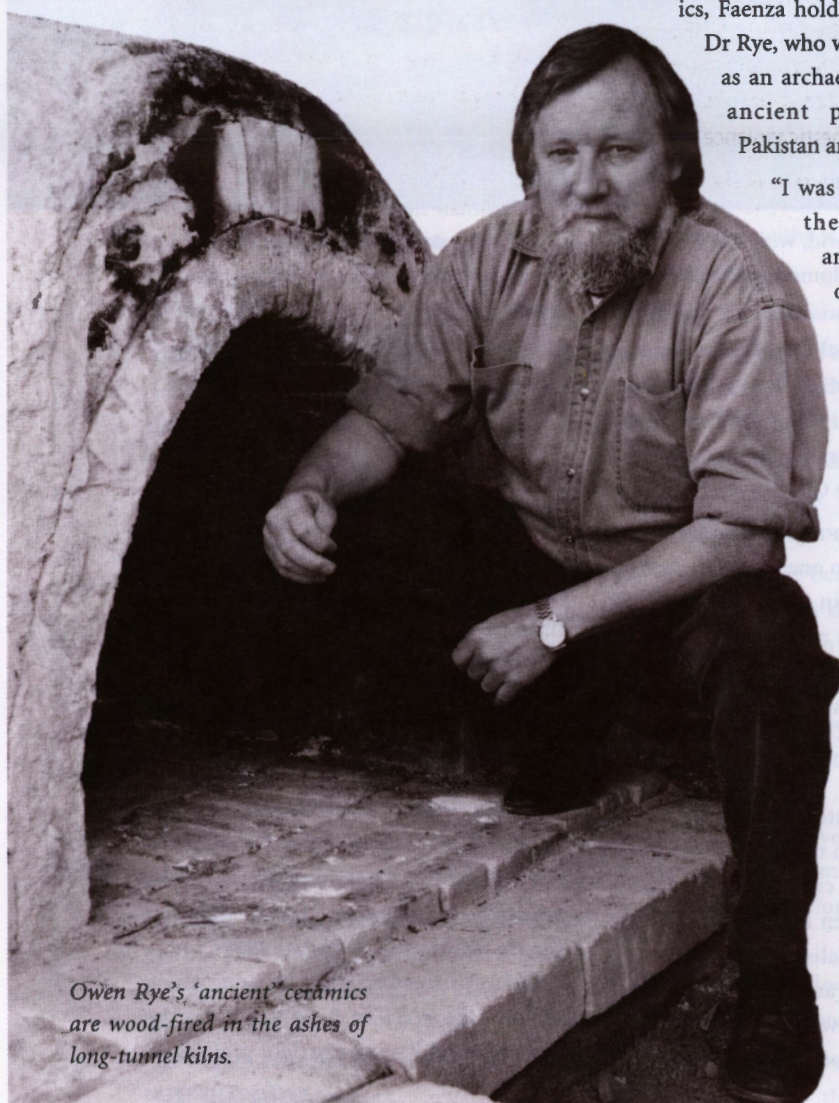
His sources of inspiration, he says, lie in the sense of mystery of past civilisations.

"I like to imagine what these ancient objects may have been used for, the hands that touched them, why they were discarded and where they lay for aeons."

Dr Rye will travel to Faenza to attend seminars, present a lecture and take part in festival activities.

The exhibition has been partly funded by the Visual Arts/Craft Board of the Australia Council and is expected to tour Japan and Singapore next year and Australia in 1997.

By KAYE QUITTNER



Owen Rye's 'ancient' ceramics are wood-fired in the ashes of long-tunnel kilns.



# Men also hit by domestic violence

*A Monash research centre has undertaken a study into domestic violence, with some surprising results.*

*Georgie Allen reports.*

Men make up almost one-third of all domestic violence cases that result in hospitalisation, according to a recently published Monash University study.

And according to the report, *Domestic Violence: Patterns and Indicators*, social and cultural factors such as men's reluctance to report their abuse indicate the rate may be even higher.

While women are injured more often than men, men who are assaulted by their female partners sustain more serious injuries and spend more time in hospital.

"Men were lacerated or punctured by knives far more frequently than women, especially to the head and arms," the report stated.

Female victims are more likely to be hit by their partner or an object, particularly ashtrays, bottles or heaters.

*Men who are assaulted by their female partners sustain more serious injuries and spend more time in hospital.*

The report, by the university's Accident Research Centre, found that women in their 20s are most likely to be victims of domestic violence.

Women aged 20 to 30 represented 39 per cent of domestic violence cases presented to the emergency wards of the five Victorian hospitals that participated in the study.

However, the report found that up to 70 per cent of domestic violence victims went undetected by hospital emergency departments in Victoria. And only 11 per cent of those detected were referred on to an appropriate domestic violence service.

"Clinical staff interviews showed a lack of protocol and education in the eight participating hospitals for detecting and managing domestic violence victims," the study found.

## Feminist history

*From Montage 16*

has been like for people in the past". Rather they are about how people directed their lives in the past.

My larger story is about the changing shape of colonial society, and of the changing role within that of "female influence". In the early decades women of the ruling class exercised some public power in New South Wales, at the governor's soirees and in the institutions of the convict colony. Poor men and women had no public power, and poor men discovered that the governor could challenge even the husbandly authority that all men assumed as a private gift. By the mid-nineteenth century the democrats who overturned the power of the governors had built a public world of newspapers, debates and eventually parliaments that

One of the problems hospitals faced was the "rapid turnover of staff", and it was recommended that hospitals provide extra time for training staff in emergency departments.

The authors were concerned about the high numbers of abuse cases that hospital staff failed to recognise, identify and refer and said the introduction of mandatory reporting of domestic abuse cases should be considered.

The 30 people, 27 of whom were women, who died during the two-year study were killed with a knife or a gun, which led researchers to recommend a greater degree of weapon control.

The report also found that suicide attempts and "intended self-harm" were often the result of domestic violence and should be examined more closely in future research of domestic violence.

The researchers warned that domestic violence was the first step towards "battered wife syndrome", which has featured in recent court cases in the defence of women who have killed their partners after years of abuse.

The study looked at 53,320 cases of "partner-inflicted injuries" at the emergency departments of four Melbourne hospitals and one regional Victorian public hospital.

excluded women. At the same time they reasserted the right of all men to rule at home. Men were the rational sex, and power should not be exercised without reason.

My co-authors take up the story of how women grappled with the impossible paradox presented by that democratic world – to be at once included in the promise of universal citizenship and excluded by its premises. This is a paradox which is closely related to the one which inspires John Hirst – that women have been excluded from the exercise of historical power, and therefore cannot write about it, or at least not as women.

Feminist historians tend to assume that paradoxes exist to be explored rather than resolved; that doors are better open than shut. *Creating a Nation* is offered in this spirit; I regret that Hirst is so anxious to deny it.



# Is feminist history bunk?

*John Hirst, a historian from La Trobe University, has argued in The Australian that a feminist national history is an impossibility. As evidence he cites what he describes as the failure of the recently published history of Australia, Creating a Nation. Monash University's Dean of Arts, Marian Quartly, one of the four feminist authors of Creating a Nation, responds.*

John Hirst is widely respected as an Australian historian. His research is admired especially for its originality; Hirst delights in asking questions that challenge established ways of thinking. It is perhaps testimony to the success of feminist history within the profession that Hirst has chosen to query it.

Hirst's argument turns on a paradox. He writes: "Feminists simultaneously declare that women have been excluded from power and that they must have an equal place in history. Since feminism's claims about the past treatment are true, its claims on history cannot be realised."

To make this claim Hirst has to hold to a particular definition of history. While admitting that history is about "what life has been like for those people (including women) in the past", he argues that historical study has a higher purpose: "To explain the processes of change, why one form of society gives way to another, why nations, empires and civilisations rise and fall."

It is men who have been the actors in this higher form of history, because only men have had the power to shape the rise and fall of nations. And they must be free men; Hirst specifically excludes serfs from his heroes of history. His masculine actors are self-motivating and rational.

Philosophers and critical theorists like Elizabeth Grosz

tend to dismiss the idea of free will as masculine fantasy. Men set themselves goals and chastise themselves for their failure to reach those goals. Women more often accept the contingency of their lives, perhaps because they know that they inhabit bodies which change independently of their will. Hirst resolutely reads no theorists, preferring to base his analysis on common sense. This is a perfectly legitimate approach, but it does make him deaf to the larger arguments of *Creating a Nation*.



To the authors of *Creating a Nation*, history is about women and men making futures for themselves in contexts that are shaped by their pasts. The largely private decisions that they make in this process create their collective future. This understanding makes nonsense of Hirst's assertion that "a nation-state is a public thing" created by only masculine action. Thus it is a central part of our argument that the making of Australia rests upon population growth, and that this growth turns upon the individual decisions of men and women: decisions to immigrate, to have or not to have children. These are private decisions, made without much "freedom of choice" as Hirst would understand it. They are decisions made by women as often as men, often by women in conflict with men. And surely they impact on "the processes of change"?

Hirst writes that "Quartly opts for intelligibility and ignores the claim made (by her co-authors) for female influence". Hirst fundamentally misunderstands the stories I am telling. The detail of my narrative is about the actions of men and women, especially women: about marrying and having children, about buying and selling, about finding work and losing it, about private and public protests and public and private concessions. Hirst mistakes these stories as intending "to record what life

*Continued on Montage 15*