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MONTAGE

NEWS AND VIEWS FROM MONASH UNIVERSITY

Unravelling the marketing web

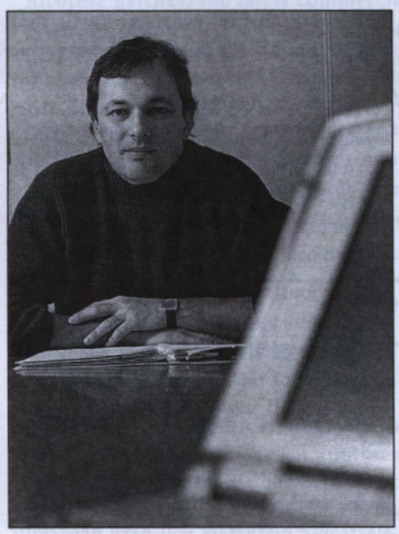
Using the Internet to market a product is a little like climbing Mt Everest, according to the man who may well be the world's first professor of electronic marketing.

Marketers have flocked to the Net simply because it's there, rather than as a result of careful thinking about business processes, says Professor Mark Gabbott, who took up his new post at Monash University earlier this year.

"A lot of marketing people see the Internet as a fantastic new channel," Professor Gabbott said. "But it currently has limited scope. Electronic marketing on the Internet, in its transaction-based form, accounts for only between 12 and 14 per cent of its total use. In fact, it is actually very dull compared with the stimulus you get from shops."

While using electronic marketing may be as simple as going on-line, defining exactly what the term means can be a little more difficult. "Electronic marketing is potentially a huge area but one that is difficult to pin down. It takes in fields as diverse as psychology, business, management, sociology, legal issues and government policy.

"Perhaps the best definition is that it encompasses every function and operation of marketing that uses the electronic medium."



Professor Mark Gabbot.

In fact, electronic marketing is just a different way of doing the same thing, said the English-born professor, who has advised the European Commission, IBM (UK) and the National Consumer Council (UK).

"In 25 to 30 years time, every form of marketing will be electronic. By that time everyone should have a grasp of virtual products, different work practices and different media."

He said the new chair at Monash was set up to define electronic marketing. "There's huge interest from businesses in electronic forms of marketing, and it's my job to help steer them through the maze. We will provide a perspective on marketing practice, taking into account all the possibilities and problems associated with the technology."

Professor Gabbott is optimistic about the future of electronic marketing, especially in countries such as Australia with its far-flung communities. "Electronic marketing can provide remote and rural communities with access to all kinds of services. It can mean the delivery of groceries, video-telephones and improved access to entertainment.

"Location is not an issue any more – the local store could be the local store of any community in the world, and that offers marketers huge potential, as long as they can deliver."

The upshot, according to Professor Gabbott, is that a very large number of people, messages and services will need to be well organised. "The Internet will need to be self-regulating, otherwise consumers can simply turn away. But it's not just about buying products, which is a relatively new service to the virtual world. There are also enormous opportunities for

Continued on Montage 2

Spike

Rocking, rolling, riding

We are usually aware of our weaknesses, but it wasn't until this year's Monash Day that one of our students acting as tour guide on the sight-seeing campus bus realised that hers was motion sickness. Her attacks of nausea and frequent stops meant that visitors saw and heard much more of university life than they had reckoned on when boarding.

Just the ticket

We've always known that Alexander Theatre productions have wide appeal, but we didn't realise quite how far reaching and popular they really were – until recently. The box office received an email from a gentleman in Europe requesting tickets to *The Hobbit*. Mr Weinmann, an Australian living in Switzerland, wanted to purchase tickets for his parents who live in Melbourne.

Who are you calling an old bag?

Spike was amazed to discover that in these politically correct days, Professor Gwenda Davey's office is in the Old Bag Room. No reflection on the good doctor – the appellation is a left-over from the days when students left their bags in a room off the main library.

Unravelling the marketing web

From Montage 1

value-added operations via entertainment, person-to-person communication, information and education, as well as not-for-profit uses. A community might, for example, use electronic means to buy its own electricity supply or entertainment."

Professor Gabbott sounded a note of caution about the new frontier, likening the excitement it stirs today to the emotions that surrounded the introduction of CB radio more than 20 years ago. "The US futurologist Alvin Toffler predicted that citizens' band radio would mark the beginning of a new millennium for the community."

Clearly, Toffler was wrong in that respect, just like the pundits who have gone overboard predicting huge things for certain forms of electronic marketing, Professor Gabbott said. "Virtual malls have virtually died. Electronic marketing is expensive, risky and still in its infancy. Not everyone takes this sort of thing on board quickly.

"Obviously certain aspects of marketing will remain physical. We are not going to see the destruction of shopping malls. And regardless of how good technology gets, we will still require people to meet face-to-face."

Adjustments would also need to occur in the workplace. "The new generation of electronic marketers will have new skills that will cause conflict with those senior managers who are unsure of what is going on. One of the outcomes will be a loss of hierarchy, a loss of authority."

Organisations, he said, would certainly look different in the future. "With the help of remote technology, sales staff won't even have to come into the office any more, and we could see more business being conducted in the home. Also in the not-too-distant future, most marketing activity will occur between an organisation and 'intelligent agents' (technology that customises information for a client) – not between the organisation and consumers."

Electronic marketing is not just about buying and selling, it's also about using.

"My particular interest is in the 'front end' – in the ways that human experience is altered when technology is introduced," Professor Gabbott said. "There are two threads – the user and the technology. Both are on different trajectories, however. Technology leads and consumers follow, but they don't follow every innovation, for the marketplace is littered with good technical ideas that nobody has a use for."

Technology is not always an improvement on human performance – in fact it can be qualitatively worse, Professor Gabbott said. "Technology can require more from individuals – for example whenever you use an automatic teller or telephone banking. If what you want is not on the electronic menu, you're stuck."

He said companies appeared to be using such technology as a defence mechanism, to put up a wall between them and their customers. "They are trying to reduce their workload by transferring some operations to consumers. Technology is supposed to be win-win. If this theory is correct, then organisations should get cost-cutting benefits and consumers should get high-value 24-hour access. But that's not always the case."

BY JOHN CLARK

MONTAGE
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Going with the flow

When it comes to output, the Murray River appears to be a little less than forthcoming.

In an average year, the country's second-longest waterway discharges less than one cubic metre of water per second into the Great Australian Bight.

On the other hand, as Mr Paul Sinclair has discovered, stories about the 2600-kilometre river flow freely.

Mr Sinclair, a PhD student in Monash's National Centre for Australian Studies, has been chronicling the attitudes of people towards changes that have taken place on the Murray since 1945.

"Some people call the river a drain, but there's still something in it not controlled by us," he said.

"In post-war Australia, people would always muck about in the river. These days people are more fearful of it – they're not sure of the way the water works. Now people prefer to swim in municipal pools."

But Mr Sinclair is not only interested in the natural history of the river – he is also curious about people's deeper attachments to it.

"I'm discovering the relationships people have with the Murray; in other words, their perceptions and emotions," he said.

"For example, some people living close to the Hume Reservoir are constantly arguing with the Murray-Darling Basin Commission. They say the commission turns the river on and off like a tap.

"Others say that during a flood, the river is just taking back some of its own."

He described today's Murray as a regulated river, and said many older residents were bitter that the communities of river workers they remembered had disappeared.

"What you do on a river frames your love for it. If you work on a river, you are going to feel differently about it than someone who occasionally travels up from Melbourne to do some fishing."

To learn more about the Murray first-hand, Mr Sinclair and his partner, midwife Jen Hocking, recently paddled a Canadian canoe 1330 kilometres from the Hume Reservoir to Mildura.

"When you travel the way we did, people know you care about the river. It also gives you something to talk about," Mr Sinclair said.

The couple camped out along the way, took photographs, interviewed people, and acquired a sense of the river.

Mr Sinclair was struck by the pride many Aborigines have in their long connection with the river.

"Many Aborigines can say – 'this is where we are from'. Settler Australians need to accept that the land and river have been loved for longer than it's possible to imagine. We need to find our own words and images that express our more recent attachment to the river. We need to share with Aboriginal people pride in the river's ancient life."

Regulation of the Murray since 1945 has radically altered the way the river flows – between the Hume Dam and Lake Victoria it is now virtually a closed system.

But the rising levels of salinity that followed in the wake of irrigation have resulted in a dramatic deterioration of water quality. Even today, Adelaide's drinking water is still occasionally declared unfit to drink by the World Health Organisation.

"Some scientists say that because of salinity the river is dying, others say science will find a solution. Still others say it's already dead, and that we'll never know the river without the European carp.

"The blue-green algae problem was important in that it made people aware of the health of the river. It gave a sense of urgency."

Dead or doomed, the Murray still continues to draw people and work its way into imaginations.

Today, tourism is the major employer on the river, even though the river of the paddle-steamers hasn't really existed for about 50 years.

"Tour operators I met said tourists love the river. They might not understand it, but they can make the connection. It's still a beautiful place despite the problems."

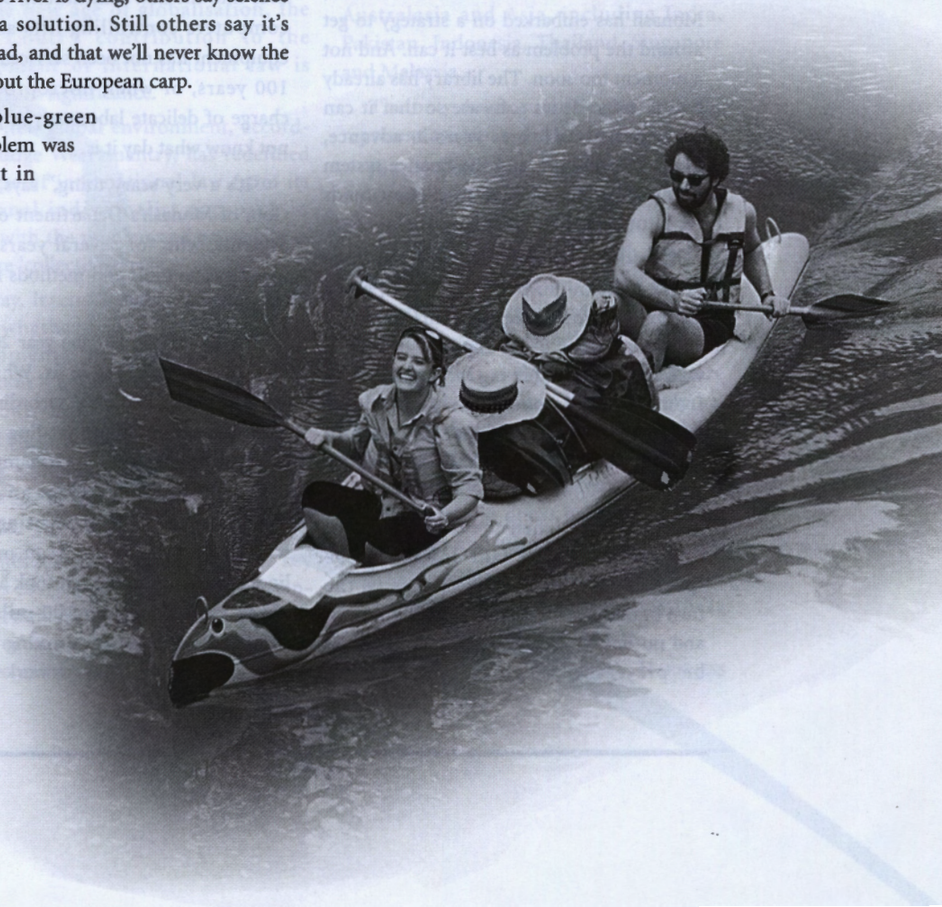
The health of the Murray is very important to the future success of much of Australia's food industry, Mr Sinclair says.

"Unfortunately, the health of our food industry may not go hand-in-hand with the health of the river. We've got to divert the water to eat, but we must also ensure that the river is somehow 'renewed'."

And for the river to be renewed, Mr Sinclair says, those who know it well will have to start talking soon.

"Communities can be brought together by shared stories, and that's a good start to finding long-term solutions to the Murray's problems."

By John Clark



Beware the

Science writer Tim Thwaites looks into the bowels of one large Australian institution to see whether it can survive the scourge of the modern computer age.

January 1, 2001 will not be the end of the world, but it's bound to cause major inconvenience to any organisation that relies on computers, says Mr Max Robinson, the head of computer systems support in Australia's largest university.

Mr Robinson, of Monash University's Administrative Management Information Systems (AMIS) unit, is referring to the so-called 'millennium bug' (officially known as the year 2000 bug), a computer problem which threatens to affect a significant proportion of the world's computers.

"Monash's administration is already having problems recording leave for the year 2000. The computer system can't deal with it. It's irritating, but not critical," says Mr Robinson, who also chairs the Monash University Year 2000 Compliance Project Executive Committee (Y2KC), a group specifically set up by the university this year to tackle the problem.

With the establishment of Y2KC, Monash has embarked on a strategy to get around the problem as best it can. And not a moment too soon. The library has already had to upgrade its software so that it can order periodicals three years in advance, Mr Robinson says, and the finance system needs to be in a position to commit funds for future years.

One difficulty is that because the cause of the millennium bug is so trivial, many people cannot come to terms with the enormous scope of its impact – or indeed with the expense of fixing it. The bug stems from the decision of early computer programmers to represent the years in dates by two digits, just as we do when we are writing.

At the time when the conventions of programming were laid down, storage space for data was extremely costly, the turn of the century was 30 or 40 years away, and no-one thought their programs would be preserved for that long or that computers would become so all-pervasive. Storing years as two digits seemed a smart thing to do. After all who could mistake '70' as anything but 1970?

But it's a problem now, because significant numbers of computers are running software that assumes all dates refer to the 20th century. To these computers, the year '07' refers to 1907, not 2007 (and who knows what '00' refers to). Many, many calculations and operations performed by computers depend on dates. Holiday leave and ordering periodicals are just the very tiniest tip of the iceberg.

It all seems so trite – it's hard to believe that year 2000 compliance is a real problem. But it all becomes more serious when computers are responsible for calculating interest on million-dollar loans which run over into the new millennium, or when the computers controlling lifts assume the equipment has not been serviced for nearly 100 years, or when microprocessors in charge of delicate laboratory apparatus do not know what day it is.

"It's a very scary thing," says Mr David Goh, of Monash's Department of Business Systems, who for several years has been investigating tools and methods for solving the problem.

The trouble is that the year 2000 bug is neither easy nor cheap to fix. While it is relatively simple to alter the recording of dates in computer programs, finding out where all the dates are would be a mammoth task. It would be conceivable for an enterprise the size of Monash to be using software which involves hundreds of millions of lines of programming. If it took a second to check each line, then 100 million lines would take one person working a 40-hour week more than 13 years to work through.

As well, not all dates are labelled in the same way; and just one undetected date in the wrong place could make a difference. And even if all the Monash University software was fixed, what about the computer links with other enterprises, or the programs and data that are daily imported into the university?

Then there is the time factor. While the absolute deadline clearly is midnight on 31 December 1999, many systems will encounter year 2000 dates long before. And as people start to become more and more aware of the difficulty, the pressure will mount on those programmers who can help fix the problem.

Programmers will be at a premium, and hence will come at a premium price. One oft-quoted estimate puts the worldwide cost of coping directly with the millennium bug at more than $US600 billion; another puts the cost in the trillions.

"And for political reasons, nobody really wants to talk about the vast sums of money needed to fix the problem," Mr Goh said. "The usual comment is: Why spend money when you appear to be getting nothing back for it? One report I read said the US Internal Revenue Service had spent 11 years and $US4 billion to come up with a new system to cope with the problem, only to announce earlier this year that the attempt had failed."

According to a report in *The Age*, Telstra has recently decided to increase the amount of money it has budgeted for year 2000 compliance from $A100 million to $A600 million.

The message, Mr Goh said, was to get onto year 2000 compliance as soon as possible. At least Monash seemed to be ahead of most other universities in

millennium bug

putting together an overall plan to tackle the problem.

According to Mr Robinson, the university has decided to approach the problem hierarchically.

"In order to minimise duplication, we want to devolve the work – like peeling the skin off an onion," he said. At the university-wide level is Y2KC, which includes representatives from each of the 10 faculties, each administrative division, and services such as the library, the computer centre and AMIS. This committee is responsible for setting overall policy and will look after university-wide infrastructure and services.

Other committees will be set up to repeat the process for faculty or division infrastructure and services ... and so on, down to the departmental level and then to research teams and individuals.

Even sorting out who is responsible for what has proved tricky, because it is difficult to determine where the university stops and the outside world begins. Monash has close links with many related entities, for example hospitals, cooperative research centres and scientific organisations. Who ensures those links are compliant?

After a Monash-wide initial awareness campaign, Y2KC launched a risk assessment program to determine the potential impact of the millennium bug on the university.

The risk impact is assessed on three scales for each piece of software and equipment and services:

- whether it is disastrous, inconvenient or trivial;
- whether it affects the whole university, a campus, a faculty, a department or an individual; and
- whether it affects people, the environment, the university's reputation, operations or finance.

The impact assessment is scheduled to be finished by early 1998.

Based on the outcome of the assessment, the committee will set priorities for its risk management policy and establish timetables for action to limit the impact of the millennium bug on the university.

One estimate puts the worldwide cost of coping directly with the millennium bug at more than $US600 billion; another puts the cost in the trillions.

Already, the committee is beginning to build and assemble a series of resources to help it and others in the university come to grips with year 2000 compliance. For instance, the university's building of an inventory of susceptible equipment has been compounded by several problems. Some equipment is recorded on the university's asset register, but much of it is not – for example equipment on lease, loan or rental to the university or equipment controlled by linked enterprises.

"Even when equipment is recorded on the register, the software it uses is not," Mr Robinson said. "There are also software files obtained regularly from other sources, such as the Australian Bureau of Statistics (which is not yet year 2000 compliant), and then there are services provided by outside suppliers, or areas of buildings such as lifts and security systems."

As part of its awareness campaign, the committee has established a web site to publicise its activities and provide links to helpful material elsewhere on the World Wide Web. The address for this site is http://www. adm.monash.edu.au/y2k/

And what should individuals do? Mr Robinson said people first needed to find out whether their equipment or software was year 2000 compliant. For anything that was not compliant, they needed to ask whether it was worth the effort to make it compliant; if not, whether it was worth replacing it; or whether it should simply be retired.

He added that for people using computer equipment for word processing, database management and electronic mail, the millennium bug may not be a problem. "And if it is, it may be something they can live with," Mr Robinson said. "Generally, year 2000 compliance only becomes important where systems are used to deal with figures or write programs, such as in spreadsheets or writing macros which use date-related calculations or functions.

"The simplest way of finding out if equipment or software is compliant is to ask the manufacturer or supplier. There are also tests and various software tools becoming available which can help you determine your computer's level of compliance."

Some manufacturers already have upgrade systems to make computers compliant, but Mr Goh warns that one size does not fit all. "Do not assume that because someone appears to have a solution to one aspect of year 2000 compliance, that it is going to suit your computer system," he said. "And do not think that because your equipment is new, you are home free.

"I know of PC software only two years old that cannot handle the year 2000," Mr Goh said. The important thing, he says, is to get working on compliance now. "The problem will really start to set in during next year, when we come hard up against the 1999 financial year."

Monash medical research scoops the pool

Groundbreaking research has won three Monash scientists accolades in this year's Premier's Awards for Medical Research. Tim Thwaites reports.

Improved movement and quality of life for sufferers of Parkinson's disease, a new clue as to the cause of some forms of cancer and a better understanding and regulation of blood clotting – these are the contributions to medicine that three prize-winning Monash students have made through their doctoral research.

Psychology research fellow Mr Ross Cunnington and Drs Caroline Speed and Simone Schoenwaelder of Monash's Department of Medicine at Box Hill Hospital took out three of this year's four Premier's Awards for Medical Research.

The major $12,000 award went to Mr Cunnington for internationally recognised work which gives people with Parkinson's disease better control over their movements.

Drs Schoenwaelder and Speed both won commendations and $6000 – Dr Schoenwaelder for research into the control of blood clotting, and Dr Speed for a study which identified a new gene which may suppress some cancers, notably brain tumours.

Parkinson's disease affects an area of the brain known as the basal ganglia. It causes loss of control of movement in two ways. The first is a characteristic tremor, which is now normally alleviated using the drug L-Dopa.

Perhaps more devastating is a loss of the ability to initiate movement. This leads to problems such as the typical shuffling gait, an inability to write, and even difficulty in rolling over in bed.

Mr Cunnington said it has long been known that people with Parkinson's disease can be assisted in walking by using external cues, such as stripes painted on the floor, to focus their minds. Patients would be asked to concentrate on taking large steps to reach a certain stripe.

But Mr Cunnington's research has now provided a scientific rationale as to why this works and, in doing so, has allowed the therapy to be streamlined and broadened to help sufferers with many other movement problems, such as writing and speech.

The ideas arising from the experimental work, supervised by Professor John Bradshaw, have already been put into practice by neurologist Associate Professor Bob Iansek and physiotherapist Dr Meg Morris at Melbourne's Kingston Centre, with dramatic results for Parkinson's sufferers.

"The change is remarkable. It makes a huge difference to their lives," Mr Cunnington said.

Movement can be divided into two categories: voluntary actions initiated internally, and actions in response to an external cue.

Since the 1960s, it has been known that the brain actually prepares for voluntary movement. This preparation activity can be seen in electroencephalograms which record electrical (nerve) activity in the brain. It takes place in the basal ganglia, the very area affected by Parkinson's disease.

So when Mr Cunnington recorded the nervous activity associated with voluntary movement in Parkinson's patients, he found there was reduced preparative activity and that the patients had difficulty in moving.

Then he recorded the electrical activity in the brains of people with and without Parkinson's disease as they responded to an external cue. His subjects had to press a button when it lit up on a panel in front of them.

Those without Parkinson's disease still showed preparative activity. (Apparently the brain still works on planning movement, even in response to an external cue, as long as it is predictable.) But this time, even without preparation, sufferers of Parkinson's disease performed almost as well.

"They were using some other part of the brain to perform the movement, bypassing the abnormal circuitry in the basal ganglia region," Mr Cunnington said.

The big difference between voluntary movement and responding to an external cue is that control of the former tends to be subconscious, while the latter is conscious.

So, Mr Cunnington and his colleagues reasoned, if voluntary movements could be taken out of the subconscious and made conscious, those with Parkinson's disease might again bypass the basal ganglia and begin to move more normally.

"So we ask them to pay conscious attention to everything they do. It's just like they are little children again, learning to walk or write or speak."

The physiotherapists at the Kingston Centre now make their patients concentrate on taking large steps when they walk, as if they were stepping over a log. Speech therapists ask them to imagine they are speaking from the end of a long room, so they speak louder. And they learn to write again between the lines, concentrating on every stroke.

The results have been so successful that staff from the centre have been asked to talk about their experience at clinics throughout Australia and around the world.

Mr Cunnington has now applied for a National Health and Medical Research Council (NHMRC) Travelling Fellowship to go to Vienna next year to do post-doctoral research with the man who discovered preparative activity, Professor Lüder Deecke.

Dr Schoenwaelder too is continuing her research overseas. She has already left on a

C. J. Martin Travelling Fellowship from the NHMRC to work with Professor Keith Borridge at the University of North Carolina in the US.

Supervised by Dr Shaun Jackson, her research has focused on platelets – small cells which lack genetic material and are carried in the bloodstream solely for the purpose of clotting to stop bleeding.

Abnormal clotting and blockage of blood vessels are central elements in heart disease, stroke, thrombosis and diabetes – the most common causes of death in Australia.

Clotting is an intricate process. When the wall of a blood vessel is damaged, the layer of cells underneath is exposed. These cells are coated with adhesive proteins to which platelets stick. Once the platelets are attached, they become activated and change shape, spreading across the wound. They also become sticky themselves, attracting more platelets. In this way a temporary plug rapidly forms over the site of the damage.

The platelet plug is enmeshed in a fibrous protein called fibrin, which anchors the plug. The fibrin fibres attach through a special receptor to contractile filaments within the platelets. Once the platelet plug is anchored, the filaments shrink back into the platelets. This process, called retraction, puts tension on the fibrin and reduces the size of the clot so that it does not present an obstruction to flow in the blood vessel.

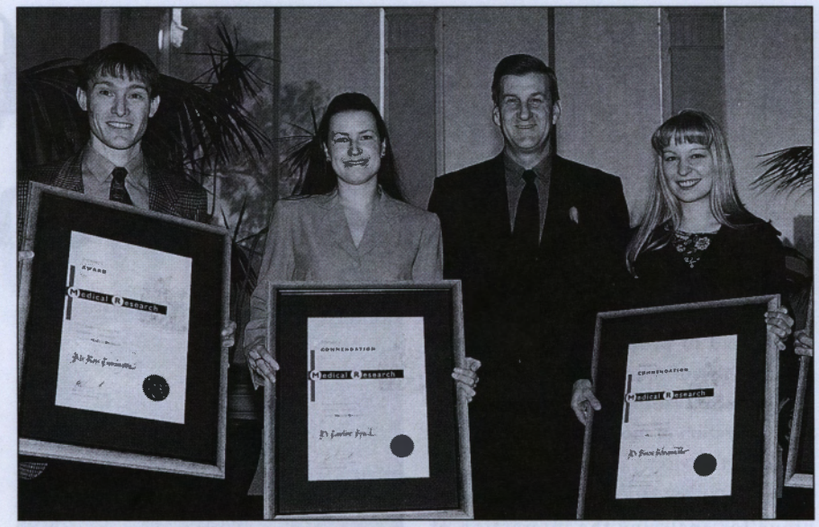
But the retraction process has to be carefully regulated so that the clot does not pack in too tightly and prevent the proteins involved in damage repair from getting to the site of the wound.

Dr Schoenwaelder studied two groups of enzymes (catalysts) involved in different levels of control of retraction. When she blocked the action of one group, known as tyrosine kinases, the receptor was unable to connect to the contractile filaments.

She was thus able to prevent clot retraction, without affecting the other functions of platelets.

The second group of enzymes, the calpains, can also affect the process of clot retraction by disrupting the tyrosine kinases and even the fibrin receptors.

By balancing the levels of these two groups of compounds, blood clotting can be carefully regulated in ways that may be very useful for the treatment of conditions of the heart and blood vessels.



Mr Ross Cunnington, Dr Caroline Speed, the Premier Mr Jeff Kennett, and Dr Simone Schoenwaelder.

By balancing the levels of two groups of compounds, blood clotting can be carefully regulated in ways that may be very useful for the treatment of conditions of the heart and blood vessels.

While Dr Schoenwaelder is off to the US to further her studies and acquire new techniques to allow further investigation, Dr Speed has decided her line of research at Box Hill Hospital is so productive that for the time being she will remain in Melbourne working with her supervisor, Dr Christina Mitchell.

"I've got all my techniques worked up here, and there's a lot more to do. I'm on a postdoctoral fellowship from the Anti-Cancer Council of Victoria," she said.

Dr Speed did not start out working in cancer research. That happened almost by accident while she was studying a family of enzymes, the 5-phosphatases, which regulate the level of calcium in cells.

Calcium plays an important role in the functioning of many other enzymes in cells, particularly those involved in cell growth. As part of her investigation, Dr Speed removed 5-phosphatase from cells in tissue culture to see what would happen in its absence.

The level of calcium in the cells increased, and the cells grew faster. But then they switched into an entirely new level of activity – they became cancerous, growing out of control, leading to the conclusion that the 5-phosphatase enzyme actually suppresses the development of tumours.

Every enzyme is linked with a gene which provides the blueprint for its production. So Dr Speed looked for the human gene for 5-phosphatase and found that it was located within the human genetic material close to a gene known to be associated with the formation of brain tumours.

There are also reports that leukaemia (cancer of the white blood cells) is associated with decreased activity of 5-phosphatase.

"The research has enormous therapeutic potential. I now need to do a lot more work to assess the range of tumours with which the 5-phosphatases are involved," Dr Speed said.

"This could give new insight into the treatment and suppression of tumour growth. For instance, I would like to take a tumour cell line without 5-phosphatase and try to reinstall it to see if this drops the calcium levels and slows the cancer growth."

Towards high-performance computer chips

Research by a Monash physicist could lead to production of computer chips of much higher performance than are now available, paving the way for a new generation of mobile phones and other 'intelligent' devices.

Dr Andrei Nikulin has developed a technique for analysing the interaction of X-rays with solid surfaces to provide detail of the structure of crystals down to the atomic level.

The Logan Research Fellow in Physics has designed software to analyse data on the intensity of scattered X-rays, thus revealing new information on crystal structure.

The analysis can provide a measurement of the composition and the strain forces inside crystals to less than 1.5 millionths of a millimetre, about the distance between four atoms.

Already two makers of scientific instruments – Rigaku of Japan and Australian Diffraction Technology in Canberra – are preparing to distribute Dr Nikulin's software with their X-ray crystallography devices.

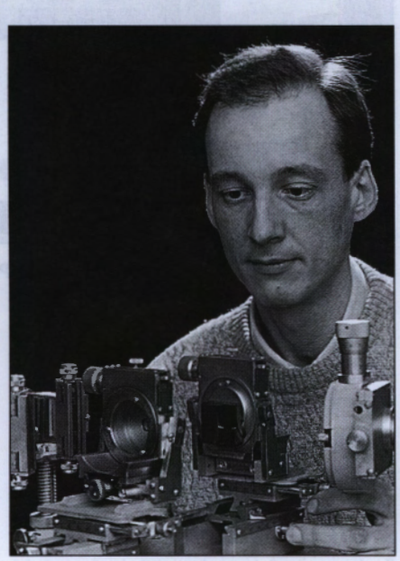
"I have been working for 13 years on innovative approaches to obtain new information on the structure of solids," said Dr Nikulin, who came to Australia in 1993 via Japan from the Institute of Microelectronics Technology near Moscow.

"This method is a very high resolution, very precise, non-destructive way of obtaining the maximum information."

Computer chips house thousands and millions of transistors which regulate the electric current passing through them. Each transistor is a tiny sandwich of compounds or elements which differ in their electrical properties.

The composition of the boundaries between the layers is critical to the performance of the transistor, and becomes more so as chips attain higher and higher levels of performance.

Until now, said Dr Nikulin, the most accurate way to be sure of the structure of



these boundary layers was to put the chip under an electron microscope.

But to do that, the silicon wafer had to be sliced and hence destroyed. Using Dr Nikulin's method, answers of the same precision and reliability can be obtained in a non-destructive way from observing how X-rays are scattered by the crystal.

X-ray crystallography is a standard technique for analysing the structure of regular crystals. X-rays are fired into a structure and are either reflected, scattered or absorbed by the atoms inside. The characteristic pattern of scattering depends on the structure, how big and how far apart the atoms are, and how they are connected.

The information is contained in the measurement of where the X-rays are scattered to.

X-rays travel as waves, and the intensity of waves at any one instant depends on two characteristics – amplitude (their height or depth) and phase (how precisely aligned with each other the waves are).

Until now, it has been possible to extract information on either amplitude or phase from the intensity measurements, but not on both. Dr Nikulin's technique provides information on both characteristics from the same data, giving a more complete and precise picture of the underlying structure causing the scattering.

The technique involves gathering data on scattering using X-rays at two different energy levels (wavelengths). Then, using clever mathematics, Dr Nikulin has been able to merge the two data sets to give a more complete picture.

It is a little like two-dimensional stereo images, taken from two slightly different angles. When the two images are superimposed and merged, as happens in our brain with the images from our eyes, the third dimension emerges and we see a picture with depth. In this case, when the data is superimposed, information on phase emerges.

Manufacturers of computer chips will be able to feed the structural detail back into their production processes. After the structure and composition of a particular chip is determined, the conditions of manufacture, such as temperature and timing, can be changed.

The precise impact of such a change on composition can now be measured. Each structural determination takes only about 15 minutes. In this way the performance of chips can be continually improved.

One benefit of the research could be the development of mobile phones capable of carrying much more information than current models, greatly expanding their multimedia capabilities.

At present, says Dr Nikulin, some German companies can produce silicon-germanium chips with transistors that operate a thousand times faster than modern computer chips. But these high-performance chips are very expensive and difficult to make.

By monitoring production on-line using the new analysis technique, it may be possible to make the manufacture of such high-performance chips more routine.

By Tim Thwaites

India promises short-term returns: report

The profitability of the Indian market is continuing to increase, but few Australian exporters realise the extent of the opportunities, according to a new report by a Monash University researcher.

More than 122 companies were surveyed in a 1997 report, 'Australian Business Attitudes to India', which updates a joint study undertaken three years ago by the Monash-based National Centre for South Asian Studies and Curtin University's Business School.

The new study shows that the annual turnover of Australian firms doing business with India increased significantly in the past three years (28 per cent had an annual turnover of $50 million plus), while the profitability of the Indian market increased by 10 per cent. Eighty-three per cent of Australian companies reported that their Indian business ventures had become profitable within two years.

Report co-author and director of the National Centre for South Asian Studies in Melbourne (a consortium of seven Australian universities including Monash) Dr Marika Vicziany said this positive outlook was reflected in the future plans of the businesses surveyed.

"Seventy-two per cent of firms said they expected strong growth in India as a market for their product, and an even greater number – 80 per cent – said their firms had plans to expand their dealings with India in the next five years," said Dr Vicziany, who co-wrote the report with Associate Professor Samir Chatterjee of Curtin University.

Dr Vicziany, a lecturer in the Business in Asia course in Monash's Department of Economics, was also author of the earlier study, which reported that 72 per cent of the 122 Australian companies surveyed said their businesses in India had become profitable within two years. This first study also identified a dominance of small to medium-sized companies with an Australian turnover of less than $1 million.

"Seventy-two per cent of firms said they expected strong growth in India as a market for their product."

"In the intervening three years there has been considerable change in the political and economic scene in India and in the bilateral relationship between our two countries," Dr Vicziany said. "These factors alone warranted a reassessment."

She said the latest findings indicated that almost every Australian firm which found a niche or a partner in India made money quickly: "Yet only 2 per cent of Australian exports go to India."

One reason for this, she believed, was that Australians don't know enough about India – but the main reason was that Australian companies were making few strategic alliances.

"Establishing strategic alliances takes time. Australian business people are too concerned with the short term and don't appreciate the importance of third markets. We only think of bilateral arrangements, and even in this regard we are too narrowly focused on exports," she said.

Building strategic alliances in India will not only strengthen our position in the Indian market, but also help Australian firms take advantage of India's markets in Africa and Eastern Europe, Dr Vicziany believes.

"India is to Africa what the United States is to India. We should be using India as a conduit into other markets."

When looking at perceptions, the authors uncovered an interesting paradox. Australian businesses currently engaged with India strongly deny there are any serious cultural, political and social obstacles to doing business in India. Yet, at the same time, the percentage of Australian firms that are negative about India has increased slightly since 1993.

"When Australians first deal with India, they think it is El Dorado. But the gloss soon wears off as a result of the practical and logistic problems of doing business with India, or indeed with any country," Dr Vicziany said.

Over time, the obstacles to doing business with India have weakened, but the Australians who are new to Indian business culture are not aware of this.

"Of course, the more engaged Australian businesses become with India, the more problems will be discovered. These are not insurmountable or, indeed, untypical of business in general."

BY DEBORAH MORRIS

Crossing the last frontier

It was, says John Rickard, a classic audition.

The man standing in judgement in the gloom of the English theatre in 1962 was not, however, your typical director. It was Noel Coward.

"Do you dance?" asked one of England's best loved composers in his clipped and immaculate tones.

"No," replied the young actor from Australia. "I move."

"Oh, one of those," said Coward, referring to the difference between students who had been trained in dance and those who had studied movement.

The young actor, now a Monash historian, is moving again. This time to Harvard, where he will be the next occupant of the university's visiting chair in Australian Studies.

Professor Rickard joins a long list of respected Australian academics to have been appointed to the position over the past 20 years, among them Manning Clark, Graeme Davison, Leonie Kramer and Chris Wallace-Crabbe.

Founded in 1636, Harvard University is the oldest institution of higher learning in the US. Judging by a recent experience of Professor Rickard's, it may also be one of its best resourced.

"I was concerned about ordering books for the library but found that the ones I wanted were already there," Professor Rickard said.

"In fact, nobody in the History department could tell me about ordering, because they have never had to do it."

He will take two courses during his two-term (semester) stay. The first, 'The Last Frontier? Australian Cultural History', is a first-year general cultural history that will draw American parallels with the Australian experience.

"I called it 'Last Frontier' because it's popular mythology in the States that Australia is the last frontier. But I'll be seeking to subvert that image.

"From all accounts students are very engaged and very articulate. However, given that they will have little information to begin with, I think it's sensible to draw as many comparisons between America and Australia as possible, such as transportation, the gold rushes, popular culture in the 20th century and GIs in Australia during the Second World War."

Professor Rickard's second course is on biography and history, which will draw on significant works from the Australian, British and American fields.

The first week of each new term at Harvard – called 'shopping week' – provides students with the opportunity to wander in and out of courses to judge both content and teacher.

"I have been told that the little knowledge of Australia that students have is likely to have been gleaned from movies," he said.

"So I thought I might put together a video of clips from *Priscilla: Queen of the Desert* and *Gallipoli* to raise questions about the great Australian myths."

Popular entertainment has long been an abiding interest of Professor Rickard's. From the late 1950s to 1971, he worked as an actor and singer in Sydney, Melbourne and the UK, where he met Noel Coward. He had earlier completed a BA at the University of Sydney.

"In Melbourne I gravitated towards Monash, where I did an MA, which turned into a PhD, then luckily into a job in 1971."

The main campus of his latest university lies just a few kilometres west of Boston, once the centre of American spiritualism.

Professor Rickard's academic interest in the spiritualist movement was fuelled during the writing of his most recent book, *A Family Romance: The Deakins at Home.* Alfred Deakin, prime minister of Australia during much of the early 1900s, had been a firm believer.

Boston is, fortuitously, also close to the heart of American theatre, another potential source of raw study material, and not just from the point of view of the productions.

"I'm quite interested in comparing the behaviour of audiences in different countries. As yet, Australians haven't got into the standing ovations of Americans, who are very quick to judge and easily rise to their feet.

"On the other hand, if they don't like something, they will tend to vanish during the interval."

Professor Rickard's interest in American theatre also extends to its influences on Australia, which welcomed US cinema as a form of popular culture in the 1920s and 30s.

"There were great concerns at the time about Americanisation and the influence of Hollywood, but we absorbed the influences in our own way.

"We were not totally Americanised – our culture is much more resilient and it's easy to exaggerate influences. We were probably more influenced by the GIs in the Second World War than by Hollywood."

BY JOHN CLARK

Professor John Rickard.

International Thais

Matchmaking, Monash-style, is fast becoming a popular activity among academic circles in Australia.

Through its new Offshore Projects and Development Assistance Unit, Monash International is pairing Australian academic expertise with the requirements of offshore development assistance projects.

Already the unit has secured a tender to manage a $20 million project aimed at improving the quality of undergraduate courses in the science and engineering faculties at 21 Thai universities.

And that is just the first of many such projects, says the unit's project management officer, Mr Paul Verwoert.

Set up four months ago on the university's Caulfield campus, the unit monitors development assistance and commercial opportunities in the Asia-Pacific region – from bilateral, multilateral and private sources – and matches them with Monash academic expertise.

Where additional expertise is required in the preparation of a bid, the unit contracts experts from elsewhere. Finally, a tender is submitted.

"Our aim is to design proposals, put forward bids and then manage the project, including all aspects such as the legal framework and business planning," Mr Verwoert said.

The creation of a central clearing-house for project work will also help overcome the problem of uncoordinated bidding, he says.

"While it's perfectly acceptable for individuals to participate, there has been confusion in the past when a department has tendered for a project in its own right, unaware that another department or centre across campus is doing the same thing.

"So, in effect, you get two sections from the same university bidding against each other."

The project in Thailand – known officially as the Thai-Australian Science and Engineering Assistance Project – is the unit's first major coup. One of the last AusAID projects in Thailand, it is due to be completed in March 2001.

Monash International's role in the project, part of a larger World Bank project worth $120 million, involves the recruitment and coordination of academics to work in Thailand on short-term appointments, usually from one to four months.

It also manages the project's fellowship program, in which 90 Thai academics and officials will be hosted and trained by Australian universities for periods of up to two months.

The unit has secured a tender to manage a $20 million project aimed at improving the quality of undergraduate courses in the science and engineering faculties at 21 Thai universities.

"The idea is to recruit and coordinate 289 months' worth of short-term advisers to carry out training workshops and to help create links between Australian and Thai universities through the exchange of expertise," Mr Verwoert said.

"Monash has at its disposal an immense amount of expertise in a range of areas, especially education, health, science and engineering, to name a few. It's early days, but so far the response from academics has been pretty good."

The project office in Bangkok is staffed by three long-term advisers from Monash – Mr Ian Campbell from Science, Mr Peter Schelluch from Business & Economics, and Dr Ian Spark from Engineering. (Mr Schelluch and Mr Paul Morgan, a short-term adviser for planning and management, have been appointed by the Cabinet of the Royal Thai Government to a working party to report on reforms to the higher education sector in Thailand.)

Apart from boosting technical expertise at Thai universities, the project has other important aims: to improve industry-relevant research, curriculum development and teaching skills, and to enhance the planning and management capacity of the Thai Ministry of University Affairs.

Partnering Monash in the project is SAGRIC International, the commercial arm of the South Australian Government; the University of New South Wales, which is developing an English language training program using CD-ROM; and the University of South Australia, which is developing the teaching techniques of Thai academics.

A monitoring body called the Australia Quality Reference Group, consisting of senior academics from participating universities, acts as the project's internal auditor, ensuring the high quality of the contribution of the Australian academics.

As well as overseeing recruitment for the project in Thailand, the Offshore Projects and Development Assistance Unit is keeping an eye on several forthcoming development assistance schemes in the region.

"We are hoping to develop participation in other aid projects funded by the Asian Development Bank, the World Bank and the United Nations," Mr Verwoert said.

The unit has been working closely with the university's Water Studies Centre to develop project proposals for South Africa and Indonesia, and is working with IDP Education Australia to implement the CAD in Architecture Project, which is training visiting Malaysian academics at Caulfield campus.

The unit is also responsible for the development of offshore business opportunities. At present, it is managing contract negotiations with Sunway College in Malaysia for campus development, and looking after the development of Unisadhuguna in Indonesia with the University of New South Wales and local partners.

For more information about the Thai-Australian Science and Engineering Assistance Project, visit the project's web page at http://www.taseap.com

By John Clark

Jokes aside

Students from the Graduate Diploma of Arts (Australian Folklife Studies) on a field trip to Tumbarumba in NSW.

A Monash study of Australian folklife has revealed a huge body of racist humour, targeting mainly Aboriginal people but also aimed at other minority groups.

The group project documenting racist humour is part of an examination of the minutiae of everyday life by students in the nation's first course on Australian folklife.

The Graduate Diploma of Arts (Australian Folklife Studies) began at Monash this year. The one-year, full-time postgraduate course is designed to equip students with skills to carry out fieldwork and research into community folkloric traditions and practices.

Course coordinator Dr Gwenda Davey said the study was an important exercise in understanding that folklore was not just about pleasant traditions but that it had its dark side.

"Almost every country in the world offers courses which look at folklife – the living culture of everyday life," she said.

"Folklife is changing and changeless. Children's games, family sayings, celebrations, customs and humour are all part of folklife, of what we do."

Dr Davey said it was hard to gauge whether racist humour had become worse since Pauline Hanson had let the racist genie out of the bottle. But, she said, Australia had not seen such an outburst of racism since the anti-Chinese riots on the goldfields of the 1850s or the introduction of the White Australia Policy at the time of Federation in 1901.

"The current round of racist jokes focuses on real issues, but the explanations are wrong," she said.

"The current round of racist jokes focuses on real issues, but the explanations are wrong."

"Many myths and jokes are the result of a combination of envy and hatred – they highlight cultural differences and incongruities but at the same time reflect our anxieties and insecurities.

"For example, the group uncovered an urban myth about ethnic groups receiving help from the government in the form a package which included a house, a car and $10,000 cash.

"Some time ago I investigated this claim and found out that in reality refugees could qualify for a $600 interest-free loan. The urban myth, like all myths, contains some truths and many untruths."

In the course of their research, the students also discovered several examples of anti-racist humour. Dr Davey said that while anti-racist humour was not always obvious, it certainly existed.

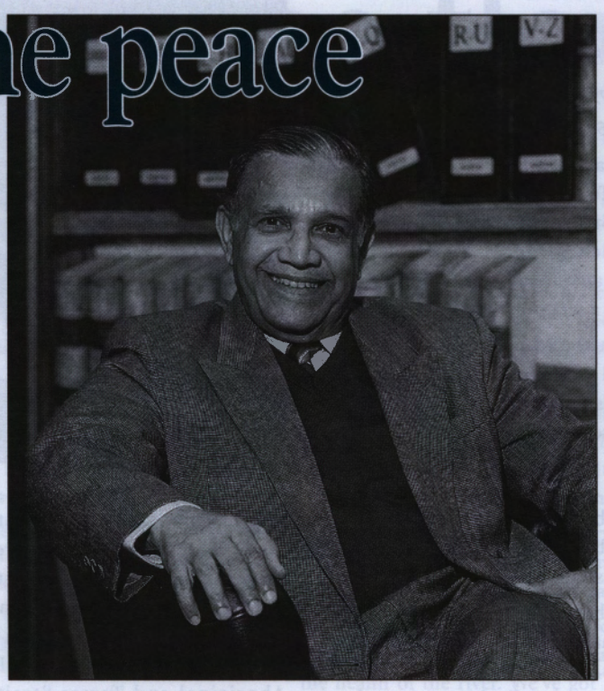
An example of anti-racist humour is a joke about an Aboriginal woman who enters Pauline Hanson's fish and chip shop. She is told that Aboriginal people are not served there: "Go to the fish and chip shop 10 minutes down the road." "But you have to serve me – I'm Cathy Freeman," the Aboriginal woman pleads. "Well, then, it will only take you three minutes," Hanson replies.

Some students felt uncomfortable about collecting examples of racist humour, but Dr Davey believed it was vital to study this kind of humour along with other darker sides to folklore, for example bastardisation and other initiation rituals in the military.

Dr Davey has recently returned from the European Association for the Study of Australia Conference in Austria, where she presented a paper examining the transmission of racist ideology in Australia through folkloric means.

By Deborah Morris

Keeping the peace



This is not a war story – but it could have been.

The situation on the Libya-Chad border was tense and armed conflict likely as Libyan forces moved in to occupy the disputed territory between the north and south borders, an area about the size of the Netherlands.

But the dramatic turn of events that followed, in which Libya peacefully withdrew in compliance with a World Court ruling, went unnoticed by the rest of the world.

Generally, only the few disputes between nations that erupt into war make international news, according to the vice-president of the World Court, His Excellency Judge Christopher Weeramantry and Emeritus Professor of Law at Monash University.

The many other threatened hostilities peacefully averted by the World Court – the United Nation's main judicial organ – rarely rate a mention in the press.

"Today, international issues and problems – whether in the fields of health, environmental management or space exploration – are of concern to the global community"

"Compliance with the law does not make news, but violations do," the judge said during a recent visit to Monash, where he was the Sir Hayden Starke Professor of Law for 19 years before being appointed to the World Court in 1991.

"When the court makes a decision in a dispute between nations, that decision is complied with, except in the rarest of instances," he said.

"Not infrequently, when these matters are referred for a ruling, tensions are high, and sometimes armed forces are primed for action at the borders.

"But in the space of time before the matter comes before the court, the parties are given some breathing space, which helps to defuse the threat of armed conflict."

In the new age of globalisation, the World Court's contribution to the development of international law is increasing in significance.

This new global environment, according to Judge Weeramantry, has redefined the scope of international law from its traditional individualist approach in dealing with the problems of nation-states to a more 'collectivist' role.

"Today, international issues and problems – whether in the fields of health, environmental management or space exploration – are of concern to the global community," he said.

"The court has a major role to play in evolving and adding to jurisprudence for the new age of interdependent and global standards."

He cites human rights as one of the key concerns covered by these new global standards. "Human rights, regardless of where denials of these rights occur, are increasingly becoming everyone's concern."

Judge Weeramantry was elected vice-president of the World Court by his fellow judges earlier this year. The appointment to such a senior role was a first for a judge serving his first term with the court.

Judges are elected by ambassadors representing the UN's member nations. Their terms of office are for nine years.

Judge Weeramantry represents most of Australasia and Asia, including India, Pakistan, Indonesia, Thailand, Singapore and Malaysia.

The only Asian countries he does not represent are Japan and China.

Judge Weeramantry, who has written 14 books on law, human rights and the environment, was visiting Monash to maintain his strong links with the Law faculty and to use the university's libraries to research his current project on human rights in the age of technology.

The project is the second in a four-volume series of essays. The first volume, *Justice Without Frontiers*, has already been published. It deals with the breaking down of barriers and the insularity of the law, and involves and draws on the disciplines of sociology and history.

"The law interfaces with many other disciplines, and we should cross these traditional boundaries of the law."

By Brenda Harkness

Australia's Lost World – A History of Australia's Backboned Animals

By Patricia Vickers-Rich, Leaellyn Suzanne Rich and Thomas Hewitt Rich

Published by Kangaroo Press

RRP $19.95

Monash academic Pat Vickers-Rich, husband Tom Hewitt Rich and daughter Leaellyn Suzanne Rich have produced a book which explores a lost world of Australian animals and plants and brings it to life with a series of stories and facts.

The husband and wife team are renowned verterbrae palaeontologists. Tom Rich is the curator of verterbrae fossils at the Museum of Victoria and Pat is professor of palaeontology at Monash University. Leaellyn says she was "raised in a world of books, fossil Diprotodons on the kitchen table and expeditions to remote parts of Australia".

The authors have produced a book filled with fascinating data, photos, illustrations and graphs, which came about because of a much younger Leaellyn's questions about our prehistoric past.

"Few if any books existed on the topic and, if they existed at all, they weren't written for children," Dr Vickers-Rich said.

"The result of this challenging period of parenthood and childhood is *Australia's Lost World*, written by all of us, parents and daughter, together."

The book is aimed mainly at upper primary and early secondary students, but anyone fascinated by the strange beasts and blooms that existed millions of years ago will enjoy it.

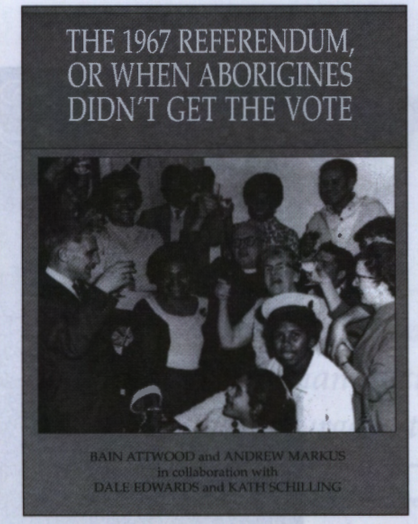
The 1967 Referendum, or When Aboriginals Didn't Get the Vote

By Bain Attwood and Andrew Markus, in collaboration with Dale Edwards and Kath Schilling

Published by Aboriginal Studies Press

RRP $25

"On 27th May 1967 an event unprecedented in Australian political history occurred: a referendum to transfer power from the States to the Commonwealth – with reference to Aboriginal people – was passed with a 'Yes' vote of 90.77 per cent. Since federation, 24 proposed constitutional alterations had been put to the electorate and only four had passed, none with such acclamation."



So begins a remarkable book, written by four Monash academics. Bain Attwood is a senior lecturer in history, Andrew Markus an associate professor in history, Dale Edwards is a staff member in the Research Section, and Kath Schilling is in the Family History Unit at the Australian Institute of Aboriginal and Torres Strait Islander Studies.

The 1967 referendum has often been represented by both sides as a major turning point in the history of Aboriginal–white relations, but what is its significance 30 years on? What meanings has it acquired since and what is its value now?

These important questions have been examined, as have other myths surrounding that momentous occurrence.

The book aims to give a realistic appraisal of the legal significance of the referendum and to contribute to public discussion of both the referendum itself and the bases of discrimination against Aboriginal people.

The authors believe that a study of the referendum and its commemoration serves the purpose of allowing Australians to reflect on the relations between Aboriginal and white Australians at the end of one epoch and the beginning of another.

Feminist Poetics

by Terry Threadgold

Published by Routledge

RRP $29.95

The Monash English professor's work, which has been highly acclaimed by linguistic and feminist academics, examines the influence of poststructuralism and feminism on poetics – the study of ready-made textual forms.

Professor Threadgold has examined texts reacting to, or telling the story of, the infamous Australian 'Governor murders' of 1900 as a case study. Using the texts (written by both men and women and coming from a wide range of genres and social spheres), Professor Threadgold answers questions raised by feminist theory: who writes for whom; who reads; and how and why.

Described as a "brilliant, wide-ranging work by a leading feminist linguist", Professor Threadgold's work concerns itself with questions such as: What is feminist poetics? Why has feminist theory stopped using linguistics? Can linguistics be post-structuralist? What is metalanguage?

Arguing that feminism and poststructuralism have changed poetics into a study of the 'making' (poiesis) or 'performing' of textual forms, Professor Threadgold's work draws on a wealth of research while looking at the work of the world's leading theorists and feminists.

Caring: Nurses, Women and Ethics

By Helga Kuhse

Published by Blackwell

RRP $37.95

The latest book from the director of Monash's Centre for Human Bioethics provides a philosophical and practical examination of what has come to be known as the 'justice versus care' debate in the care of terminally ill patients.

Professor Kuhse argues that the 'care' approach is dangerous and may perpetuate the moral disenfranchisement of women and nurses.

The author suggests a decision-making framework, in which nurses play a central role, where terminally ill patients would be able to refuse treatment and also receive direct help in dying.

Caring provides essential reading for students of ethics, nursing and feminist philosophy.

Books in this column can be purchased in the Monash University Bookshop, Clayton campus – telephone (03) 9905 3111.

NOW & THEN

Recently

The October 1996 issue of *Montage* featured a wildlife conservation team that was using a captive breeding program developed by Monash researchers to save the critically endangered Victorian brush-tailed wallaby.

The researchers have since rescued several of the near-extinct wallabies, including one male, from a handful of remaining colonies around Victoria to form the nucleus of a captive breeding group at Healesville Sanctuary.

The program, led by Monash University's Department of Anatomy, will use a technique known as cross-fostering to accelerate the species' reproductive rate.

It is part of a joint project with the Victorian Department of Conservation and Natural Resources, Melbourne University and Healesville Sanctuary set up to help prevent the few surviving Victorian colonies from dying out.

Fewer than 40 of the Victorian brush-tailed rock wallabies remain at only a few sites in East Gippsland's Snowy River region and in remote parts of the Grampians.

Monash researcher Dr David Taggart said the genetically unique Victorian brush-tailed rock wallaby, which once numbered several hundred thousand, had become so rare and elusive that it was now nicknamed 'The Shadow'.

"Urgent action was needed to reverse the declining population, or the wallaby was destined to become extinct within the next few years," he said.

Using the cross-fostering technique, the researchers expect to boost the rock wallabies' reproductive rate from one to four offspring annually.

The method involves using surrogate females from a related species to rear the brush-tailed rock wallaby pouch young. "This enables the female to cycle again and produce further young," Dr Taggart explained.

This Month Last Year

Women today have access to a wider range of occupations than a decade ago, but men remain ahead in salaries and continue to dominate the full-time, higher status and more powerful jobs, according to a new book on women in the workforce.

The co-editor of *Women in a Restructuring Australia: Work and Welfare*, Professor Anne Edwards, commented that the 1990s have seen differentiation and some polarisation of particular categories of women with particular occupational sectors along the lines of race and ethnicity, educational background, family circumstances and geographical location.

5 Years Ago

A major study of nicotine addiction at Monash will see more than 1100 moderate-to-heavy smokers trying out transdermal nicotine patches, the latest commercial product aimed at helping wean smokers off their habit.

But Australia's largest study into the effectiveness of this new nicotine replacement therapy is also paying close attention to the psychological factors which can cause smokers to relapse, even after their addiction has been broken.

15 Years Ago

Monash University artist Celia Rosser was at Government House, Canberra, last month when the Prime Minister Mr Fraser presented the Queen with a copy of the first volume of her monumental work 'The Banksias' on behalf of the people of Australia.

The presentation volume – one of only 730 printed – is the first of three planned books in which all 70 or more of the unique Australian plant will be illustrated and described. It has been described as one of the world's finest collections of botanical watercolour drawings.

An immense book – it measures about 770 mm x 550 mm and weighs 18 kg – it sells for 965 pounds sterling. But already sales have reached 130 and steady sales have been reported overseas.

25 Years Ago

The Monash English Department is to give students personal contact with established writers in an effort to stimulate more creative writing.

Bruce Dawe will become the university's first poet-in-residence, for one week from 4 September.

The head of the department, Professor David Bradley, said he hoped to have a succession of leading writers visit the campus for extended periods.

Resurrecting the GST

From Montage 16

But the ALP is in opposition, and the ACTU is weak these days. The confusion sets in when the recent performance of ACOSS, and, to a lesser extent, the Australian Democrats, is taken into account.

Both bodies have become advocates of the need for 'reform'. In using this word, ACOSS and the Democrats use the same language as business, yet the meaning they attach to the term is very different.

Both groups want to see an increase in the tax burden placed on the affluent – a message they find very difficult to communicate, particularly via a media that tends to side with business when tax reform is discussed.

This is precisely the point at which the Howard government can pursue a policy option that would otherwise be unthinkable, given the fate of both Keating and Hewson when they tried to include a consumption tax as part of their reforms.

The almost naive way in which ACOSS in particular has approached the tax issue gives the federal government scope to include the major welfare advocacy group in a corporatist-tending arrangement to debate 'reforms' that the government might later enact.

Having advocated the need for change, ACOSS could hardly opt out of a multi-interest group discussion process that (surprise, surprise) concludes by recommending the need to include a consumption tax as part of a major reform.

If the Howard government had the political skill and intelligence, it could put itself well on the way to succeeding in bringing in a GST where previous proponents have failed. All this depends on obscuration of the word 'reform'. The GST is still alive and possible.

Resurrecting the GST

The GST ghosts of elections past have not been laid to rest, according to Monash politics lecturer Nick Economou.

Bereft of any innovative policy ideas, totally lacking a vision for Australia's future and constantly under pressure from its business constituency to do its bidding in the national parliament, the federal Liberal-National Coalition Government has flagged its intention to undertake significant reform of Australia's taxation system.

For all intents and purposes, this promise of reform means revisiting the issue of a consumption-based tax.

For the Coalition, the re-emergence of the spectre of a Goods and Services Tax involves a certain degree of fear and loathing. It is widely held, after all, that the Coalition failed to win the 'unlosable' 1993 federal election precisely because a GST was the centre-piece of its Fightback! election manifesto.

John Howard was so certain of this causal link that he promised not to impose a GST in his first term of government as part of his 1996 election manifesto.

Much water has flowed under the bridge since the 1996 election, however, and the Howard Government has not performed particularly well in those policy areas that have dominated the debate since then.

Desperate to divert attention from his government's failings and anxious to placate a restless business constituency, Howard has decided to play the tax card.

Because diversion is Howard's primary reason for flagging taxation reform as a major issue, the tax debate as it currently stands is extremely half-baked. Indeed, there is a strong sense that much of the debate's dynamics are a carry-over from the last two occasions anyone raised the prospect of instituting a consumption tax.

John Hewson, the Liberal leader in 1993, tried it and failed. So, too, did the then Labor Treasurer Paul Keating in 1985. In both cases, the proposal to impose a GST was defeated – in Keating's case by his failure to secure the support of Bill Kelty and the ACTU at the 1985 Tax Summit, and in Hewson's case by the electorate.

In short, any proposal to levy consumption tax is strongly opposed by the less affluent, who see through the pro-GST hocus pocus rhetoric of cashed-up business executives and their apologists in the

commerce and business schools of academia, and who understand that a GST will increase the price of food and shelter.

Anybody who thinks they will win elections by proposing new taxes should not be offering themselves as political advisers, for their careers will surely be very short.

And so, even before it starts, the tax debate is dead, right? Well, perhaps not.

Since the election of the Howard government, important changes to the dynamics of the tax debate have occurred. Lately, political elites prefer to talk about general reform to the taxation system, and it is at this point that adversaries of a consumption tax actually find common ground.

Everybody in the debate agrees that the current taxation system is inadequate, although the reasons for this inadequacy – and the proposed panaceas – vary from interest group to interest group.

Business interests argue that Australia should fall in to line with other Western industrial nations where consumption taxes are the norm.

Interestingly, business concurs with government's view that taxation avoidance is a major problem which consumption taxes can solve, although it is conceivably only those on executive salaries or those with vast amounts of personal wealth who have the resources, and the motive, to participate in such avoidance schemes.

State governments, too, are interested parties in this debate as Jeff Kennett's very public advocacy of a GST has indicated. Since 1975, the states have suffered significant declines in Commonwealth transfers in real terms, while community demands for services have increased.

This occurrence of 'vertical fiscal imbalance' (VFI) has been exacerbated by the Commonwealth's dominance over personal and company income tax – a taxation power, incidentally, that Canberra and the states actually share.

What the states would dearly love in their search for solutions to VFI is some opportunity to levy their own income taxes. Interestingly, John Hewson's Fightback! would have given the states just such an opportunity, firstly by cutting personal income tax as a compensation for applying a GST, and secondly, by making massive cuts in federal payments to the states. In effect, Fightback! would have forced the states into levying their own income taxes.

The combination of local and national taxes is not uncommon in countries that have consumption taxes. Canada, for example, has both a consumption tax and provincial (state) income taxes. Even unitary Britain has a double-barrelled tax slug – something that proponents of a GST never really talk about when they cite Britain as a glowing example of how consumption taxes can bring about tax relief.

In Britain, local government is responsible for delivering a host of welfare and education services, and all Britons who live in some form of shelter are liable for Council Tax.

These taxes are very significant – in the City of Liverpool, for example, residents have to pay up to $A2500 a year to their local authority regardless of their income.

Indeed, the regressive nature of the tax is compounded by the fact that these taxes reflect the extent to which councils have to deliver services. Thus, the more affluent boroughs have relatively small taxes, while poorer boroughs have high charges.

While nobody says that Australia should adopt a Council Tax system (yet), this example illustrates that the claims that consumption taxes bring tax relief are illusory.

The imposition of a GST in Australia may very well provide the opportunity the states have been looking for to impose their own additional taxes.

In the meantime, the current tax debate has been profoundly confused by the utterings of those who would normally be the stalwart opponents of anything that would lead to a consumption tax.

The ACTU, the ALP, the Australian Democrats, and, as far as anyone can tell these days, the Australian Council of Social Services (ACOSS) are opponents of a consumption tax. This simply reflects the interests of their constituencies, for consumption taxes are regressive – a simple fact that not even the most creative proponents of consumption taxes can deny.

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