MONTAGE

NEWS FROM THE CAMPUSES OF MONASH UNIVERSITY

VOLUME 4 ISSUE 4 JUNE 1993 16 PAGES

SAVANT

Ukraine: Europe's forgotten nation

➤ Analysis P12

RESEARCH

The down side of Victoria's reduced road toll

➤ Research liftout

PROFILE

The archivist's dilemma

➤ Story P4

Food scheme fills the gap

A Monash student has confirmed the veracity of the saying 'there's no such thing as a free lunch' – hers cost 20 cents. More than 1500 primary school children in the Dandenong/Doveton region are being supplied regularly with cheap lunches thanks to Mrs Anne Wilson, whose university project has been transformed into a major community service.

As part of her studies for the Bachelor of Arts (Human Services), Mrs Wilson gathered data on what primary students from the Dandenong area took to school for lunch. She was particularly interested in looking at those schools classified under the Commonwealth Government's Disadvantaged Schools Program.

She discovered that not only were many students consistently taking non-nutritional foods, but also many were arriving with little or no lunch at all.

"It was fairly typical to see teachers supplying extra food for those children who didn't bring lunch," she said. "In some instances the demand on teachers had become so great that they had the students pool their lunches so that each child got at least some food. The situation was worsening in line with the effects of the recession on the community."

Eight years working in the Department of School Education meant that it wasn't enough for Mrs Wilson to merely identify the problem – she went in search of a solution. The hunt took her to her present job with Oz Child – Children Australia.

Having unsuccessfully approached about six large food companies for donations of food and/or money, Mrs Wilson was drawn to an article in the *Sunday Age* about Footscray Football Club's involvement in the Western suburbs' Care for Kids program.

As a result, Hawthorn and St Kilda football clubs, who had recently made Waverley Park their home ground, were approached. These two AFL clubs are closest to the Dandenong/Doveton area.

The response from Hawthorn was immediate, indicating their enthusiasm to become involved with the schools and make a contribution to the wellbeing of students. St Kilda responded positively and agreed to take part at a later date.

In September, just four months after she began her research, Mrs Wilson, with the support of Hawthorn, began a soup program in a Dandenong primary school. Called the Lunches for Kids program, it provided each child in the school with a cup of soup, a bread roll, and a piece of fruit for 20 cents.

"Meals on Wheels supplied 40 litres of soup for $20, and local bakeries donated day-old bread. For the program to become self-sufficient though, we realised the need for a major fund-raising drive, which we held in November last year," Mrs Wilson said.

The day, which was attended by the entire football team, raised $11,500 and resulted in approaches by more than 20 corporate sponsors with offers of help.

"Dandenong Station Brake and Service Centre donated a trailer with two hot plates that can cook 600 sausages in 10 minutes," she said. "They also provide a staff member to deliver and tend to the trailer at the schools every day."

At present, the program includes 10 schools in the Dandenong/Doveton region, and new schools are being added to the lunch rounds every month.

Five schools are visited by the trailer once a week, and the other five once every five weeks. Under the new scheme, a sausage in bread, a piece of fruit, and an orange juice costs just 20 cents.

The program assists the whole school community, not just those students who regularly arrived at school with little or no lunch.

Continued on page 2

A Monash project has become a major community service in Melbourne's outer eastern suburbs.

Government cost cutting puts schools at risk

Education in Victoria may have suffered lasting damage as a result of the process late last year to declare teachers in excess, according to a Monash study.

Researchers from the university's School of Graduate Studies in the Faculty of Education have found that relations within school communities have been seriously harmed as a result of the State Government's cost-cutting exercise.

The study, commissioned by the Victorian Secondary Teachers' Association and the Federated Teachers' Union of Victoria, concludes that the process was mishandled and seems to have gone badly wrong.

One of the authors, Professor Alan Bishop, said the study produced some disturbing findings. "One of the most worrying was the lowering of morale in the teaching service. The whole process has had a negative effect on the system at large, not just on the teachers most directly affected by being placed in the pool," Professor Bishop said.

In previous years, teachers would be declared in excess as a result of changes in enrolment patterns. But all were guaranteed first rights of transfer. "The system was working well until last November, when suddenly it was used to reduce drastically the number of teachers.

"Although the government says no teachers have been sacked, many of them have been placed in the short-term replacement teacher pool, which is tantamount to saying 'we don't need you'," he said.

The study examined the experiences of 450 teachers from 232 schools across the state. Many were vehement in their criticism of the process, even those who had not been declared in excess.

The study found that the processes and criteria used varied widely from school to school – itself a cause for concern.

"I am worried about the idiosyncratic nature of the process," Professor Bishop said. "Principals had minimal guidelines and went about their task as best they could, but the pattern varied across the state. Many respondents to the survey said if you had a good relationship with the principal, chances were you would be OK."

One teacher said: "The principal chose who she did not like or want at the school ... she didn't use a process." The report said: "There was good data that personal relations with the principal was a crucial criterion and equally good data that principals dominated the decision as to who should be replaced."

"It doesn't say much for the profession if teachers can be treated in such a cavalier fashion. One would like to see a growth in professional standards in schools, but this action knocks that on the head," Professor Bishop said.

In at least one school, all teachers declared in excess were female. In another, one respondent felt that migrant teachers were unfairly targeted.

While many teachers were angry that principals had to make personal decisions, others were more sympathetic: "I realised that the principal faced a difficult decision."

Teachers also criticised the Directorate of School Education. "I don't believe the principals were provided with sufficient information to carry out the political dirty work with consistency across the state," one teacher said.

"This action harms relationships between teachers and principals, among teachers themselves, and ultimately rubs off on the relationship between teachers and students."

The Monash study team: (from left) Mr Ian Mitchell, Associate Professor Dick Gunstone, Professor Alan Bishop and Mr Chris Penna. Missing from the photo-call was Ms Kate Brass.

NOW & THEN

25 YEARS AGO

Attention is drawn to ... the installation of an in-dialling system. ... This new system enables outside calls to be made to university extensions at any time whether the switchboard is manned or not.

The new system has a disadvantage, however, in that in-dialled calls are not transferable from one extension to another ...

15 YEARS AGO

The "steady state" in tertiary education is likely to continue even after an economic recovery, a Monash academic predicts. Dr Leo West, senior lecturer in the Higher Education Advisory and Research Unit, says one reason to expect a continuation of the steady state is that there appears to be little chance of any growth in demand for tertiary education, at least from the traditional source.

5 YEARS AGO

Caught toying with the "Apple of Wisdom" under the Newton tree in the faculty courtyard are Engineering's three deans. The caption accompanying this unsolicited contribution [and photograph] read: "The tall jovial one in the middle is Emeritus Professor Ken Hunt (Dean 1960–1975), for whom Deanship is a receding memory.

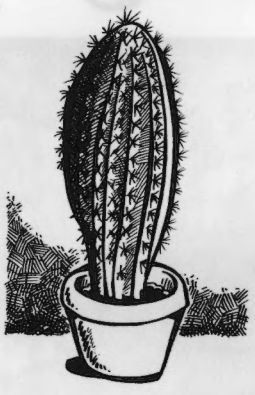
The relieved looking one on the left is Professor Lance Endersbee, Pro-Vice-Chancellor (Dean 1970 – 1988) who has just relinquished the Deanship. The one with the forced smile is Professor Peter Darvall (Dean 1988–ongoing)."

THIS MONTH LAST YEAR

The five [Monash] switchboard operators direct and connect the business and private telephone calls for more than 3000 academic and general staff at Clayton every day. During peak times, this amounts to about 25 calls every minute – or 1500 calls an hour ...

In recent years, the [Monash] switchboard has been entirely computerised. When a call comes in, the operator has only to type the name of the person required, and the full name, title, location and extension of that person will appear on the operator's screen.

THE SPIKE



■ Northern disclosure

We always knew that Sydney and Melbourne residents were estranged by more than the hue of their number plates. But now it seems the denizens of NSW may be of an entirely different race altogether. A recent letter to Monash from the University of New England in Armidale was addressed, very much on spec, as follows:

Centra Cawlin Buliding
Wales University
Wellington Rocci
Clayton 310

■ Educated at a distance, to be sure

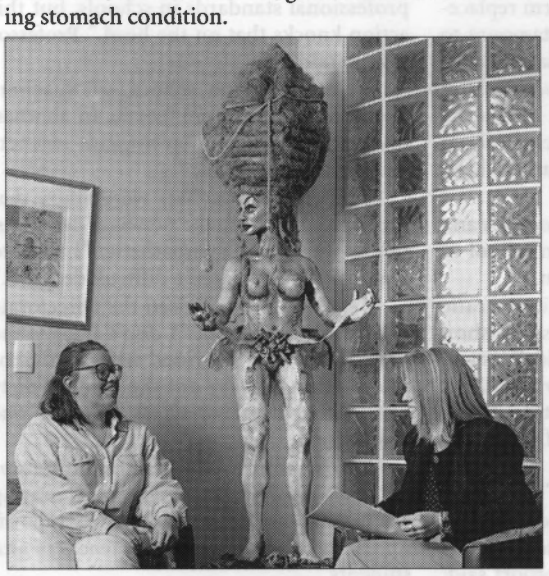
Seems distance education students will go to extreme lengths to study at Monash. (Judging by the paragraph above, Australia Post will hoof an equal mileage to make sure Monash keeps in touch.) The Faculty of Business discovered their most far-flung pupil after a recent search. Lisa Palmer, a banking and finance student, lives in Ireland.

■ Fax or friction?

Staff in an unnamed (but we know who they are) Monash department have only just learned that recycling does not have to be instantaneous. The recent juxtaposition of their new shredder beneath an existing facsimile machine (we'll leave to your imagination the mechanics of what ensued) gave new meaning to the practice of sifting through the facts.

■ They've landed!

Agerona... try saying it backwards. Still baffled? Join a lengthening queue. Agerona, the latest artistic addition to the School of Marketing (below), seems to have whipped up the kind of curiosity usually found only in the vicinity of a traffic accident. For those without colour sets, she has blue hair, green skin and an interesting stomach condition.



Filling the gap

From page 1

"Parents of students know that one day a week they can have a break from preparing school lunches. They know that for 20 cents their child will receive a three-course meal – that's a real saving for families."

The program does more than just provide food for students in disadvantaged areas, it aims to create and enhance a sense of community within the schools by involving parents in serving food when the trailer visits.

Players from the Hawthorn and St Kilda football teams often visit the schools as part of the lunch program. According to Mrs Wilson, this provides students with role models that reinforce the importance of eating properly.

"It has been proven time and again that students who lack adequate nutrition may experience difficulty in concentrating and learning," she said. "If we want kids to develop to their full potential, we need to ensure that they are being adequately nourished.

"I believe the problem of primary children arriving at school without lunch and often breakfast is an important issue for schools, educationists and governments alike. Children at this age are far more vulnerable than older secondary students, who are often more resourceful.

"A means-tested lunch program for disadvantaged kids has been operating in the US since 1946, and many states also run a breakfast program. Ultimately my aim is to see a lunch program set up on a national scale."

Mrs Anne Wilson

The Lunches for Kids portable kitchen is prepared for another lunchtime rush of more than 200 hungry children.

Mrs Wilson says the move to approach the Hawthorn Football Club was pivotal in her career. If she had not received its backing, and the public profile that goes with it, she would not be working for Oz Child – Children Australia today.

"With the change of government, funding for my previous position in the Department of School Education was withdrawn. Oz Child, through their partnership with Hawthorn Football Club, became aware of the Lunches for Kids program. They wanted to ensure the continuity of the program and other services such as counselling, referral and advocacy in these schools, and so employed me," she said.

"Oz Child – Children Australia is an amalgamation of three well-established children and family service providers – Family Action, Family Focus, and the National Children's Bureau. They, along with the Hawthorn Football Club, Dandenong Station Brake and Service Centre, City of Dandenong, Tip Top Bakeries, Lions Club of Dandenong, and St Kilda Football Club, are major sponsors of the Lunches for Kids program. The St Kilda Football Social Club makes sandwiches for one school per week."

Mrs Wilson is looking to expand the program in several ways. A promotional campaign in metropolitan schools that she has planned for the near future aims to create community awareness of the needs of families with children in disadvantaged schools.

"We also want to promote the program to provide support and assistance to those in the wider community interested in establishing similar projects in other areas," she explained.

Mrs Wilson is studying at Monash part-time and will complete her BA at the end of the year. She is very interested in doing more research into what primary school children take to school to eat. Interested researchers may contact Mrs Wilson on 561 1800 (pager number 10082).

MONTAGE
NEWS FROM THE CAMPUSES OF MONASH UNIVERSITY

Montage is published by the Monash University Office of University Development.
Views expressed by contributors in *Montage* are not necessarily endorsed by Monash University. No responsibility is accepted by the university or the editor. Articles may be reprinted in whole or in part by permission of the editor.
Editor: Bridget Montgomery, Public Affairs Office phone (03) 565 2085, fax (03) 565 2097.
Staff writers: Vicky Anderson, Suzie Bourne, John Clark, Susanne Hatherley.
Photographers: Richard Crompton, Brian Carr, Rhonda Joyce, Andrew Barcham, Steve Morton, Adrian Dwyer.
Graphic artists: Peter Bartelt, Phil Scamp.
Computer production & quality control: David A. Hamono, phone (03) 565 6009.
Montage is entirely produced on Apple Macintosh computers using QuarkXPress, Photoshop and Nisus.
Imageset by Pageset, 4 Palmer Court, Mount Waverley.
Printed by Camten Graphics, 15 Neutron Place, Rowville.
Registered by Australia Post: Publication no. VBG0435.

Melbourne to Adelaide on one litre of petrol

Imagine being able to drive a car from Melbourne to Adelaide, and begin the journey back, using only one litre of petrol. Tests on a car of the future being developed by Monash University and Dandenong TAFE suggest that this may not be as impossible as it sounds.

According to the vehicle's creators, the car may be able to travel more than 800 kilometres on just one litre of petrol.

Called The Eagle, the car weighs only 110 kilograms, and is constructed from fibreglass, aluminium, kevlar and carbon. It will compete in this year's Shell Mileage Marathon, to be held in November, in the two-seater commuter class.

Senior technical officer in the Monash Chemistry Workshop Mr Jim Cook says that this class has been introduced to the competition to encourage entrants to develop practical, commercially viable vehicle designs.

"The aim is to build something that is close to a road vehicle," Mr Cook explained. "The Eagle can seat two passengers in an upright position. It is equipped with lights, front and rear suspensions, a braking system, and even a horn."

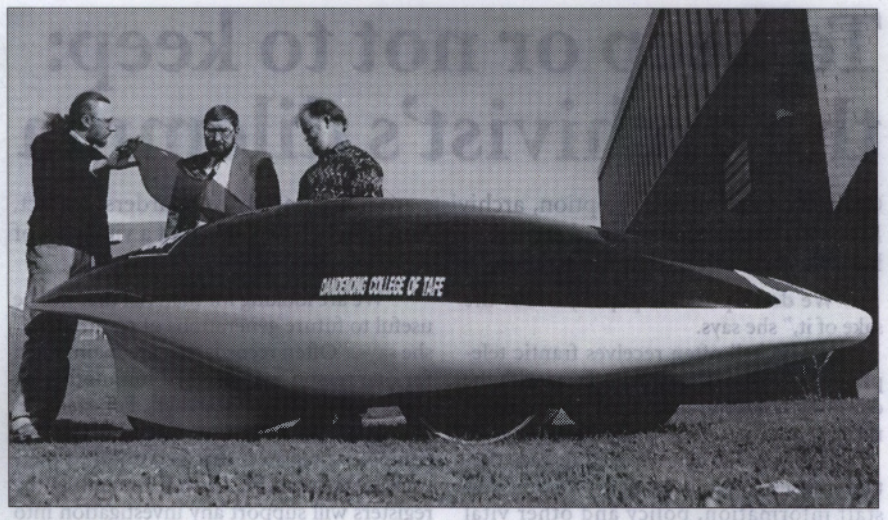
Mr Cook was responsible for designing and constructing the suspension, brakes, steering and drive system. His prior experience, building and preparing motorbikes for the Grand Prix circuit, provided an invaluable background in working with composite materials to create what Mr Cook describes as "an extremely slippery little car".

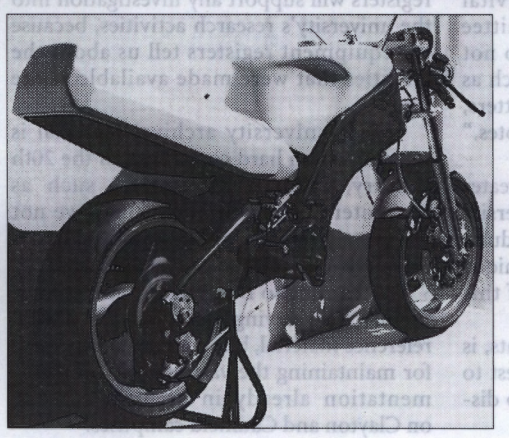
Mr Cook made the brake pads from bonded plastic and the suspension from carbon and kevlar.

The Shell Mileage Marathon is an annual event that encourages engineers and school groups to apply themselves to the design and development of energy efficient vehicles.

According to Mr Cook, the six-month project, which involves students and lecturers from Dandenong TAFE and representatives from the Monash Chemistry Workshop, has been a valuable learning and relationship-building exercise.

"The Faculty of Science has always had links with Dandenong TAFE, but these have been strengthened during the course of the project," Mr Cook said.





Above: (from left) Mr Jim Cook, senior technical officer in the Monash Chemistry Workshop, with Dandenong TAFE staff members, acting principal, Mr John Parish, acting principal, and Mr Don Elliott of the Fibre Reinforced Plastics Department.

Left: Another Cook creation – this revolutionary motorbike, built from reinforced polymers, can achieve speeds of up to 300 kilometres per hour. Although it has yet to be accepted on Australian race tracks, the motorbike has featured in Austrade exhibits as an example of Australian innovation.

Part of the team behind China's first nationwide English teaching program: (from left) Gippsland lecturers Mr Phillip Edwards and Mr Neil Courtney, pro vice-chancellor Professor Leo West, and Professor Wang Guo-Fu of Suzhou University.

China switches on to English of the air

The first nationwide English teaching program in China will soon hit the airwaves, courtesy of the university's Distance Education Centre on Gippsland campus.

The Monash Development Fund has given the centre $76,000 to develop the program, which was prompted by a widespread demand for English speakers by Chinese employers and a growing interest in Sino-Australian relations.

The 40-week course, which starts in January next year, will be available to all applicants for a fee and will lead students to intermediate and advanced levels. Successful students will be awarded a Monash certificate.

The project is a joint venture initiated by Professor Wang Guo-Fu of Suzhou University and Monash Gippsland lecturers Mr Neil Courtney and Mr Phillip Edwards.

"There are already English language programs in China," Mr Courtney said. "The distinctive thing about the new program is that it's the first to be taught nationwide."

He said the program aims to improve students' employment prospects in China, especially those wishing to work in the tourist industry and on joint ventures with western firms.

The course takes the form of two half-hour programs a week, which are then repeated. It will cost the equivalent of about $A25 a year.

The Chinese regional radio network will broadcast the course and provide study centres for a back-up tutorial service. Exams will be held at centres across the country.

Production of audio tapes, course text and assessment will be controlled by the Gippsland centre in collaboration with the English Language Teaching centre on Clayton campus. "We will produce the master tapes, and Suzhou will make multiple copies," Mr Courtney said. "We are relying on the considerable organisational experience of Professor Wang, who estimates enrolment in the first year will reach about 10,000."

Mr Courtney hopes the infrastructure used in the English program may be used by other teaching programs in the future.

Australian first for graduates

Forty-three Monash students became Australia's first Bachelor of Social Work graduates by distance education in May.

Australia along with Canada and Norway are the only countries offering the social work degree by distance education (DE).

According to the head of the Department of Social Work, Professor Thea Brown, the aim of the course was to overcome the severe shortage of professional staff in social and community services in rural Victoria.

"The shortage of social workers was much greater in country areas since fewer new graduates were taking positions there. Also, experienced country workers were being drawn into urban areas to fill the large number of vacancies," Professor Brown said.

Distance education coordinator in the department Ms Desma Strong said: "Our first intake tended to be from rural Victoria because at that stage the course was partly funded by the State Government. We have students from every state now because our reputation has grown and funding comes from the Commonwealth Government."

The course is a graduate professional degree that qualifies a person as a social worker. Ms Strong believes this is one of the reasons the course has such a low attrition rate.

"DE courses tend to have higher drop-out rates than on-campus studies because of the difficulties involved, and because most of the students are working full-time as well," she said.

"A general arts or business degree by distance education doesn't provide a professional qualification in the way that the Bachelor of Social Work does, so there may not be the impetus to stay in the courses. Also, for rural people the Monash course is one of the few opportunities they have to become a social worker and remain in their community."

According to Professor Brown, 60 per cent of the graduating students have completed the course in minimum time. "While DE students do not do as well in the first two years as on-campus students, they do better in the last two years of the course," she said.

The four year, part-time course has units in cross-cultural relations, child abuse, family violence, group work, human development and law. A 26-week field work internship gives the students experience in interpersonal, intervention, assessment and interviewing skills.

Despite the current economic climate, these graduates will probably have no trouble finding work, Ms Strong says. Most are already working in the profession and there is always the need in rural communities for the skills these graduates have.

A worldwide network of distance education social work providers has been established, and England is currently trying to introduce a course through their Open University scheme.

This year, the Monash course is experimenting with new technology in the DE Masters program. A group of students in country locations are being taught using teleconferencing, fax, and personal computers with modems.

Two of Australia's first distance education social work graduates, Ms Helen Rawlings (left) and Ms Kim Bolding, celebrate completing the course in minimum time.

To keep or not to keep: the archivist's dilemma

Contrary to popular perception, archivists are not compulsive hoarders. In fact, Monash records manager and archivist Dr Ann Mitchell explains that a vital part of her role is deciding what not to keep.

"We don't preserve paper just for the sake of it," she says.

Dr Mitchell often receives frantic telephone calls from departments faced with the daunting task of moving their accumulated mass of information to a new location.

"It is obvious that we need to keep certain classes of financial data, student and staff information, policy and other vital administrative material and committee documentation, but many people do not know what to do with other data, such as departmental meeting papers, newsletters, case files and even private research notes," Dr Mitchell explains.

"Often these documents provide greater insight into the business of the university than the official records. I advise individuals and departments to consider what is unique about what they do. Information of this kind will be vital for our archives."

Dr Mitchell, or one of her assistants, is available to appraise records on request to determine whether it is appropriate to dispose of or save the material.

Her experience as a historian is invaluable when it comes to sifting through documentation.

"We are looking for material that will be useful to future generations of researchers," she says. "Often records that are maintained for one reason may be used for another by historians or other researchers. For example, I targeted for retention our non-current equipment registers that had outlived their usefulness for audit. The information in the registers will support any investigation into the university's research activities, because the equipment registers tell us about the facilities that were made available at the time."

Most university archival material is maintained on hard copy. Even in the 20th century, modern alternatives such as computer access and microfilm have not completely replaced the researchers' desire for hands-on access to original sources.

According to Dr Mitchell, microfilm is useful for preserving back-up copies of vital reference material, but it is far too expensive for maintaining the vast quantity of documentation already in archival custody on Clayton and Caulfield campuses.

Researchers also find microfilm very difficult and tiring to read for long hours, and prefer to refer to the hard copy.

The mission of the university archives is to preserve records documenting university development in all aspects of teaching, research and administration, including social and political context where appropriate, and to make the archives collection available for research use.

The core element in the university archives collection consists of policy papers from central administration, including reports, correspondence and the committee proceedings of key decision-making bodies. Archives also accepts unique records kept at faculty and departmental level and papers maintained by individual academics and administrators. Offers from university representatives, office bearers and alumni may be considered.

The term "records" may be used to describe either paper-based or electronic information, and may include architectural plans, art drawings or prints, photographs (positive and negative), slides, movie film or videos, discs, tapes, cassettes, official university publications, and some classes of print ephemera. In exceptional circumstances artefacts also may be eligible for deposit with related records.

The normal mode of acquisition is by inhouse records transfer or by donation.

Monash archivist Dr Ann Mitchell: "We are looking for material that will be useful to future generations of researchers."

"We have to balance our space problems against the costs of microfilm and electronic transfer. The fact is a building usually works out cheaper than converting documentation to other media," Dr Mitchell said.

Finding storage space for her records is difficult for Dr Mitchell. At present, she is unable to accept large collections from departments. But she is keen to hear from anyone, particularly retiring academics, who may have important source material "tucked away in their offices".

"It doesn't really matter where the material is as long as we know where to find it. We also have to describe the material to our professional standards so that we have an accurate record," she explained.

"We have an important collection on the Caulfield campus now that is waiting for adequate central storage. The Chisholm Institute dated back to 1915, and the records provide a wonderfully rich resource for those interested in the history of education."

A guide to the holdings of the Monash University archives is due to be published later this year.

Dr Mitchell is an independent professional historian in her own right and was founding president of the Professional Historians Association of New South Wales. She holds two research degrees in history, and her PhD on the Alfred Hospital was published as a book, *The hospital south of the Yarra*. The book is still regarded as an important reference work.

Dr Mitchell worked in the registrar's office at the University of Leeds for three years. Later, as official historian at the Sydney Hospital, she confronted a serious problem experienced by older institutions that have failed to control huge accumulations of non-current records. This prompted her to undertake the archives administration course at the University of New South Wales.

Dr Mitchell has been a regular contributor to the *Australian dictionary of biography*, a standard reference tool for biographical information. She also drafted the code of ethics for the Australian Society of Archivists (ASA), which will be put up for adoption at the society's next annual general meeting. She was convenor of the Victorian branch of the ASA in 1991–92.

In addition to maintaining the university's historic records, Dr Mitchell and her staff of 15 are also responsible for current central administration record keeping and retrieval. In 1992, this task alone involved 62,529 file movements and the processing of 242,935 pieces of mail!

Still striving for excellence in teaching

An ability to tune into student needs is one of the secrets of distinguished teaching advocated by two Monash lecturers.

Mrs Joycey Tooher of the Faculty of Law and Mr Rob Hagan of the Faculty of Computing and Information Technology are well qualified to talk about their philosophies.

As recipients of the 1992 Vice-Chancellor's Award for Distinguished Teaching, their efforts have been recognised and applauded by the university (the third winner, Dr Anne McDougall of the Faculty of Education, was absent at the time of writing). But, as they would say, the task is not an easy one.

"Being an effective teacher means you have to be totally committed to your discipline and students," Mr Hagan says.

Mrs Tooher: "We are here to provide a total teaching package."

Mr Hagan takes pride in his notes, hand-outs, and lectures. He delivers and expects excellence. "I insist that all written and verbal communication with the student be error free. As many of my students are Asian, this is imperative when they are still perfecting their English," he says.

"I strongly advocate clear aims and objectives for a subject, adequate staff training, well-tested and effective administration systems, and materials and specifications available to students in the first week of classes.

"As you can imagine, in the constantly changing environment of software development, this can be quite difficult and time consuming."

Mr Hagan is adamant about maintaining enthusiasm, excitement and fun in lectures. He insists on having a deep knowledge of his lecture material and expects his students to listen and read.

"While we conduct student evaluations by HEARU as a matter of course, the best feedback comes in seeing a spark in a student's eye, a laugh, or smiles and nods of understanding," he says.

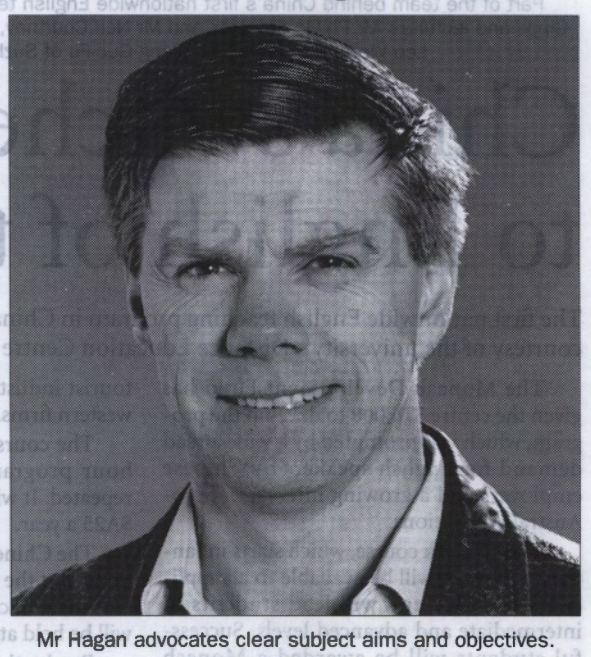
"Receiving the VC's award has recognised the leadership and effort put into improving the quality of teaching in the Software Development department. On a larger scale, these awards are vital to support the push for teaching as an equal promotion criterion in the university."

For Mrs Tooher, her commitment to students and her discipline is equally strong.

"We are here to provide a total teaching package. This means ensuring that courses and subjects challenge student perspectives, are well structured, stimulate students to come up with their own answers, and use assessment as a teaching process, not just as a means of accreditation," she says.

"Students, I believe, have the primary responsibility for their own learning. I use the Law faculty's Socratic method of teaching to direct and extend student learning.

"I reread and rework my material each year to make lectures reflect today's society and issues. My lecture material also adapts to differences in student groups each year."



Mr Hagan advocates clear subject aims and objectives.

Mrs Tooher makes a conscious effort to broaden her teaching methods and techniques. "I am constantly learning about new ways of presenting and teaching. I learn from books, my students and their evaluations, other lecturers, and staff appraisals," she says.

"The vice-chancellor's award brings well-deserved prestige to the Faculty of Law. The faculty places importance on teaching excellence and encourages staff to develop to their full potential as teachers.

"The award has also brought personal honour. But it has not meant that I can rest on my laurels, as one must always strive to improve."

Noted philosopher to head Gippsland

University of Wollongong academic Professor Lauchlan Chipman has been appointed pro vice-chancellor at Monash University Gippsland campus.

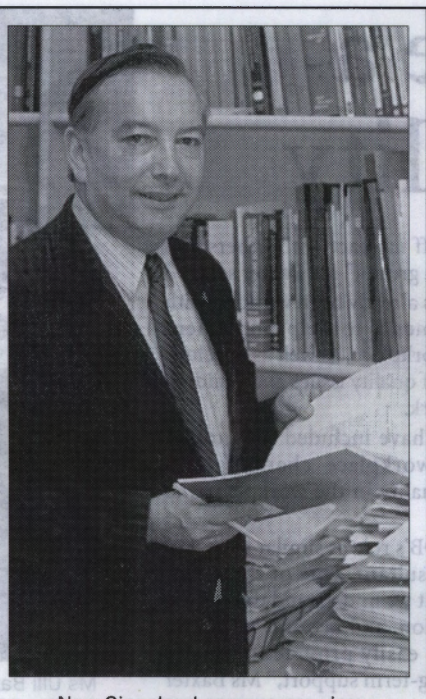
Professor Chipman, the pro vice-chancellor at Wollongong, has been associated through his teaching and research interests with Oxford University and the universities of Melbourne, Sydney and NSW.

In 1985 he was appointed Liberal Arts Fellow in Law and Philosophy at Harvard University Law School. He was named pro vice-chancellor at Wollongong in 1989.

Throughout his academic career, Professor Chipman's research interests have focused on existence (philosophical logic) and the jurisprudential areas of human rights and relationships between law and ethics.

In a joint statement, Monash vice-chancellor Professor Mal Logan and chair of the Gippsland Advisory Council Mr John Hutchinson welcomed Professor Chipman's appointment.

"Professor Chipman has an international reputation as a scholar and writer, and his experience at the University of Wollongong is relevant to the work of Monash University in Gippsland. "Professor Chipman will head the Gippsland campus operations and will be involved in the university's distance education program in Australia and overseas."



New Gippsland campus pro vice-chancellor, Professor Chipman.

A taste of uni life for secondary students

"Should I go to university?" is a question that perplexes most secondary students. For more than 300 Year 11 students though, the decision will be made much easier thanks to the Monash Junior University Program (JUP).

The Junior University Program (JUP) gives students throughout the state an opportunity to live on campus and experience university courses, career paths, facilities, and social life.

JUP activities include lectures, discussions and practical sessions, as well as a barbecue, disco, tours of the faculty buildings, and an opportunity to live on campus in the Halls of Residence.

Program coordinator Ms Rosemary Martin said: "The three-day program gives students a feel for what university life is like, and helps stimulate interest in studying at Monash.

"It is important for those students who may not have considered tertiary education because of distance or circumstance," she said.

The Course and Careers Centre, which introduced the JUP in 1986, run one or two programs each year with demand often exceeding the number of available places.

Corporate support for JUP

Five companies – Michael's Camera Store, Coca-Cola Bottlers, Safeway, Buttercup Bakeries and Uncle Tobys – will support this year's JUP.

Michael's Camera Store will provide two polaroid cameras and 20 rolls of film so that participants can take away a memento of their experience.

Coca-Cola Bottlers will provide more than 500 cans of soft drink and five cases of orange juice, Safeway has offered 40 kilograms of sausages and hamburgers for the barbecue, Buttercup Bakeries will supply 25 loaves of bread, and Uncle Tobys has offered 300 individual snack foods.

"This kind of support from companies is invaluable if we are to maintain this important introductory program," marketing manager Ms Susanne Hatherley explained. "We try to keep the costs down so that all interested students are able to participate in the program."

Smaller companies club together

Research and development doesn't have to be big business, according to the Monash Faculty of Engineering. The faculty has established a club to encourage local small- and medium-sized industrial companies to take advantage of the facilities offered by the university.

According to Professor Brian Cherry, associate dean of Research and Development in the Monash Faculty of Engineering, many companies are overlooking the advantages of establishing ongoing links with Monash.

"For $200 a year, companies with an annual turnover of between $2 and $100 million can have access to seven co-operative research centres (CRCs), one key centre for teaching and research, and nine specialist research centres, all based within the Monash Faculty of Engineering," Professor Cherry explained.

The faculty has established the Sir John Monash Engineering Club with the intention of extending the advantages of industry–university cooperation and collaboration to smaller companies.

Specialist research centres, such as CRCs, usually involve collaboration with industry partners that can commit $100,000 per year to the centre over a long period, such as 10 years. But, Professor Cherry says, the faculty also recognises that smaller industrial companies have short- and medium-term requirements .

"We believe the Sir John Monash Engineering Club will provide a vehicle for the development of such opportunities," he said.

"A list of current research being undertaken in the faculty will be circulated to club members at the end of each January. This will enable members to select a project with which they might like to become associated, or they might join a research consortia and support a larger project.

SIR JOHN MONASH ENGINEERING CLUB

"Even if they do not nominate a project, members will be invited to attend research seminars and club luncheons where they will have an opportunity to discuss the latest developments with leading academics."

The club will also operate as a link between industry and graduates, and encourage the development of the Federal Government's National Teaching Company Scheme. The scheme employs graduates to handle specific development projects in industry. Club members will also be able to use the faculty's consulting and laboratory facilities.

"We can provide specialists to work with companies on problem solving, training, research development and the commercialisation of new technology," Professor Cherry said. "We believe that smaller companies can't afford to be without this kind of expertise and support when the marketplace is so competitive. More companies are expected to compete against not only local, but also international competitors."

Membership will be limited to 100 organisations. For further information, telephone 565 5368.

"STEP INTO MY OFFICE..."

Anne Sublet

Interviewing the vice-chancellor's secretary, Ms Anne Sublet, is an exercise in patience.

The telephone rings constantly. Several minutes into the interview and already the phone had rung five times.

"This is quiet at the moment," she says. "The v-c is away, so the traffic of senior staff who would normally beat a well-worn path between their office and the v-c's has ceased.

"The job is usually very busy and the telephone doesn't stop. People who drop into the office sometimes have to wait through three telephone conversations before they can actually talk to me," she says.

Ms Sublet, who has worked in the vice-chancellor's office at Monash for 10 years, has observed many changes.

"Monash has changed and grown so much in the time I've been here. I began working here when Ray Martin was vice-chancellor, and have spent the last six years with Mal Logan," she says.

"Every day is different and you need to be very flexible because things change at the last minute. The v-c may need briefing papers to be typed, meetings to be arranged, and an interstate trip to be planned as a result of one phone call, and the diary for that whole day then needs to be rearranged," she says.

"There is a lot of variety in the job and I've met some interesting and well-known people, like Prince Philip and Sir Edmund Hilary."

While there is no daily routine to follow, Monday is always one of the busiest days of Ms Sublet's week. She is greeted with a stack of files on her desk, the legacy of a weekend's work by the vice-chancellor, who often uses the two-day break to catch up on paperwork.

Ms Sublet was raised and educated in Perth, and worked at the University of Western Australia for three years. She moved to Melbourne in 1983, and applied for the position. The rest, as the books say, is history.

She also has a strong family link with Monash. Her daughter Elizabeth graduated from Monash with a Bachelor of Arts degree last year, and her youngest daughter Jennifer is in her first year of primary teaching at Frankston. Her eldest daughter Susan has lived in Kuwait and now teaches in Costa Rica.

Secretary to the vice-chancellor, Ms Anne Sublet.

Prehistoric beasts to visit Monash

Monash has introduced many international visitors to Australia, but none more likely to attract the public's attention than the 24 'visitors' from Russia arriving later this year.

The director of the Monash Science Centre, Dr Patricia Vickers-Rich, is negotiating with the Institute of Palaeontology and the State Association 'Rossia' in Moscow for an Australian tour of the unique Prehistoric Russia exhibition.

The exhibition comprises 50 dinosaur specimens, including 24 full skeletons of original material. It is scheduled to arrive in Australia to coincide with the launch of Steven Spielberg's new movie, *Jurassic Park*.

Dr Vickers-Rich, best known for her exploratory work at Dinosaur Cove near Apollo Bay, believes that public interest in dinosaurs will reach unprecedented heights, exceeding response to the 1982 Dinosaurs of China exhibit which attracted almost 500,000 visitors over six months. Ten thousand people flocked to the Museum of Victoria in just one day.

"Something about dinosaurs excites the imagination," she said. "This year dinosaurs will star in movies, feature on Australian postage stamps, make the cover of Scientific America, and be seen in department stores such as Daimaru. We remain fascinated by these extinct giants."

The Prehistoric Russia exhibit will be the largest display of its kind to tour Australia, and unlike many other exhibits, it will include real specimens rather than casts. Not surprisingly, seven Australian museums have expressed interest in the exhibit: the Museum of Victoria, the Australia Museum (Sydney), the Queen Victoria Museum (Launceston), the Queensland Museum, the Northern Territory Museum, the South Australian Museum and the Western Australian Museum.

The Marketing Unit in Monash's Office of University Development is working with Dr Vickers-Rich to attract sponsors for the tour, which will cost about $150,000.

Helping create a culture of quality

THE STAFF DEVELOPMENT BRANCH (SDB) will emphasise client satisfaction this year in their push to develop a 'culture of quality and excellence' at Monash.

Ms Ulli Baxter of SDB says attention to problem solving, simplification of processes and working in teams is also important.

"Experience overseas and elsewhere has shown that job skills training and personal development underpin any organisational change," she said.

She believes administrators at Monash are placing more emphasis on improving the quality of procedures and processes. She said the goals set by the SDB for 1993 are in line with strategic directions determined by the vice-chancellor, Professor Mal Logan, and senior deputy vice-chancellor, Professor Ian Chubb.

The SDB, which runs training development programs for general staff, will be working with departments committed to developing and maintaining a culture of quality.

"To be effective, training has to deal with individual and group needs. All members of staff interact with others and work as part of a group," Ms Baxter said.

The SDB has already been working with several departments to help implement change in the workplace, as well as developing knowledge of quality issues and building skills in teamwork.

Workshops have included such topics as managing workplace changes, self-employment, quality in the workplace and team-building.

"I see the SDB's role as similar to that of an internal consultant. One of the major advantages is that we understand the culture of the organisation, and because we are on campus we can easily provide follow-up training and long-term support," Ms Baxter said.

The SDB is also working with HEARU on joint projects to ensure greater links between academic and general staff. "We would like to foster closer working relations between academic and general staff to ensure both groups are working towards common goals," she said.

The SDB recently held a week-long middle-managers program at Lorne on the theme of 'Leading Quality'. The program was designed to provide managers with basic skills for implementing quality initiatives, and an opportunity to improve leadership, team building and management skills.

"Feedback from program participants has been very positive and supportive of the value of quality in effecting beneficial change," she said.

Ms Baxter, who joined Monash last year, moved into staff training after leaving secondary teaching, managing a health insurance branch and a stint at running her own catering business. She spent nearly three years in personnel management and human resources with Manchester Unity before joining Monash.

Ms Ulli Baxter:"To be effective, training has to deal with individual and group needs."
The SDB team: (from left) Ms Anne Mennell, Ms Ulli Baxter, Mr Lionel Parrott, Ms Candy Millsom and Ms Di Barker.

Extending links

DR CLIVE COOGAN and Monash extend back a long way, even – it might be claimed – as far back as its conception.

As he waited at Parliament House in 1958 listening to the passing of the bill that would approve the establishment of the new university, Dr Coogan would have had little inkling of the strength of the ties 35 years later.

Dr Coogan has been connected with Monash in many ways since those early days. A solid state physicist by training, he was the first CSIRO scientist to come to Clayton. He even set up CSIROSIP (Society for Ingestion and Pontification) about 30 years ago to draw Monash and CSIRO staff closer together.

Dr Coogan was also one-time chairman of Chisholm Institute. At present, he is president of the Monash Club and head of its wine committee.

In this role, he is overseeing the revival of the club under the management of Mr Joseph Borg.

"We are improving our food and wine prices so that members can be assured of a decent meal, reasonably priced wine and congenial relationships with their fellows," Dr Coogan said.

"University clubs vary enormously. We are trying to be one of the very best."

Under Dr Coogan's direction, the wine committee aims to offer good wine, wine tastings, and social events.

"We're looking forward to hosting Professor Doug Lampard, who in addition to being foundation professor of electrical engineering at Monash, provides yeasts to the wineries of the Yarra Valley," he said.

Other Monash electrical engineering graduates (inspired by Professor Lampard perhaps) who own wineries will also speak at the club.

Dr Coogan studied originally at Sydney University, and completed his PhD at Bristol University, UK. He is the inventor of the fibre-optic nephometer, which measures cloudiness in liquids or gases.

Today Dr Coogan holds positions on the boards of a number of companies, theorises about science and sits on University Council.

One of his memories of parliament in 1958 is when they passed a bill to build a railway line to Clayton campus.

"As a university, Monash has surpassed everyone's expectations," he says. " We are still waiting for the railway."

Drink problems rise as consumption falls

By SUZIE BOURNE

THE LEVEL OF ALCOHOL consumption per capita may have decreased in Victoria, but women are drinking more and teenage binge drinking is on the rise, according to a recent Monash study.

The research, conducted by Dr Ian MacKay of the Centre for Molecular Biology and Medicine, is designed to help overcome the state's lack of intervention into alcohol-related problems.

"Despite Victoria's concentration of medical research institutes and the state's commitment to scientific endeavour and health promotion, investigation and intervention into alcohol-related problems at the medical and sociological level is weak and insignificant compared with other Australian states," Dr MacKay said.

The report, titled 'The Dimensions and Effects of Alcohol Abuse', looks at trends in consumption, the psychological, physical and emotional outcomes of consuming alcohol, and possible preventive measures.

"Increased drinking by women is cause for concern," says Dr Mackay. "Because women drink less, their drinking problems have gone relatively unnoticed."

While it is presumed that women drink safer amounts of alcohol because they drink less, their physiology means that alcohol is more harmful, even in smaller amounts.

"While men have a higher level of dependency on alcohol, drug addiction in women is generally more enduring. Using alcohol to alleviate chronic psychic needs often produces habitual and prolonged abuse of alcohol by women," he said.

Dr Mackay believes that role deprivation, rather than conflict from an overload of expected roles, may be a more salient factor in why some women drink too much. "This is illustrated by a rate of dependency that is higher in the unemployed and people with high-pressure jobs," he said.

The report also looks at the different motivations of men and women when they drink. Men tend to drink in anticipation of positive emotional effects, whereas women hope to reduce negative and stressful emotional states.

Men and women also differ in their behaviour when seeking help. In the private physician's office, the ratio is three men to one woman; in hospitals it is six men to one woman; and in alcohol-related police records there are 11 men to every woman. This, says Dr Mackay, underlines the crucial difference between men and women in the way that the dysfunction erupts and manifests itself.

Dr Mackay says that assigning a 'cause' to alcohol abuse is not a simple or effective way of solving the problem. In one place, the report says: "As a result of altercation, Mrs X takes a loaded gun and shoots Mr Y through the heart resulting in his death. The commonly held view would be that Mrs X's intention to cause bodily harm, manifested by pulling the trigger, was the cause of Mr Y's demise."

There are, however, many causes, which are equally required for Mr Y's death to occur: the fact that the gun was loaded, that Mr Y and Mrs X were argumentative, that Mrs X was a good shot and even the failure of Mr Y to wear a bullet proof vest. Of course, alcohol-related causes are just as complex.

"Alcohol could cause a problem or alternatively be the manifestation of another issue. Ideally, we are trying to come up with what has been called an 'aetiological fraction' that indicates the degree of causal relationship between alcohol and the resulting problem."

Family dysfunction, psychological susceptibility, societal and cultural culpability are problems that might bring on alcohol abuse.

"The incidence of alcoholism is clearly higher in families of alcoholics," Dr Mackay said. "But the various roles of genetic and environmental factors have been hard to separate."

The report states that most people start drinking in adolescence. This is a time when people go through developmental and life-cycle transformations such as increasing pressure for self-support, establishing intimate relationships outside the family, and emotional and physical vulnerability.

In Australia, despite lower consumption overall, teenage binge drinking has increased. In 1988, 88 per cent of males and 82 per cent of females aged between 14 and 19 had experienced alcohol.

Dr Mackay said: "Australian teenagers, compared with those of other nationalities, tend to attribute a more positive social function to alcohol."

Other controversial findings expose problems in what constitutes a safe limit. The popular limit is four glasses per day, but Dr Mackay says for women the safe limit is probably two glasses. He says that the safe limit should be further defined in terms of a safe limit for driving, good health, and so on.

"Since no level can be designated as safe for all or any individuals under all circumstances, should we really speak of safe at all? Perhaps responsible is a better term," he said.

The report concludes with potential preventive measures for reducing alcoholic dependency. It says that we must take into account community attitudes as much as individual behaviour, and government policy and industrial compliance must complement these attitudes.

Dr Mackay suggests that preventive education-based strategies be introduced into schools and the general community so that people understand the effects of alcohol on mood, performance, work capacity, judgement and behaviour. He also suggests that special groups, including Koories, women and young people, be targeted.

RESEARCH
MONASH

A tropical temptation for polar plants

Bridging the pharmaceutical gap

Kidney supply fails to meet demand

The supply of donor kidneys in Victoria is declining but no corresponding ease in demand appears likely. Thanks to the efforts of one Monash doctor, the public is beginning to learn about this urgent need.

As improbable as it might seem, there has been at least one negative outcome from Victoria's reduced road toll – a serious shortage of donor kidneys for transplantation.

Professor Napier Thomson, chairman of Monash University's Department of Medicine at the Alfred Hospital, and director of Renal Services at the Alfred Group of Hospitals, says that the annual rate of renal failure in Victoria is the same as in other Australian states. About 100 persons in every million suffer irreversible kidney failure.

And yet Queensland, partly because of its higher road accident rate, has almost twice Victoria's rate of kidney donation. Victoria's kidney transplant program is chronically short of donor kidneys, placing a heavy burden on the state's renal dialysis services.

"Irreversible kidney failure is a major problem in Australia," Professor Thomson says. "Thousands of people rely on dialysis or kidney transplant programs to keep them alive. But there is a serious shortage of resources for treatment, especially in Victoria. Of every 100 new patients who suffer irreversible kidney failure, we can treat only 58. The US treats 160 per million – nearly three times more patients per capita."

Australia's treatment rate, among the lowest of the OECD nations, reflects an ageing population. Although irreversible kidney failure can occur at any age, it is more likely to occur among older age groups. The higher US treatment figure is because many more elderly patients are treated.

"In Australia, the shortage of donor organs and dialysis facilities means that the focus must be on patients aged under 55. Only residual resources go to patients aged between 55 and 70," Professor Thomson says.

The shortage of donor kidneys in Victoria means that many more people are on permanent dialysis, yet the financial resources for dialysis are not proportionately larger. Professor Thomson explains that transplantation is always the preferred option because it offers a better quality of life, and in the long term is substantially cheaper.

"The cost to the community of irreversible kidney failure is enormous. Dialysis for one patient costs at least $40,000 a year," he says. "Transplantation is much cheaper, with the initial operation, medical care and immunosuppressive drugs costing about $30,000 in the first year after the transplant. Costs in subsequent years are much less.

"We can try to minimise the cost of dialysis by putting machines into patients' homes, where they can do dialysis themselves, or into limited-care centres. But the Alfred Hospital has almost no home dialysis facilities because it has no budget to match the heavy demand. This sector of Melbourne, which extends out into western Gippsland, is poorly supported by dialysis facilities."

Ideally, all patients with irreversible kidney failure should be given transplants, but a variety of factors including poor awareness and the overtaxing of intensive-care units means the supply of donor kidneys falls short of demand.

"There is no doubt that Victoria's success in cutting its road accident rate has dramatically reduced the rate of organ transplantation," Professor Thomson says. "But part of the problem is getting people working in intensive-care units to notify us when patients are certified as brain-dead.

"We have done a survey which suggests that for every donor organ we get, we miss out on another two. In half the cases, the family does not give permission to take the organs, but in the rest, hospitals fail to notify transplantation coordinators of a potential donor. Even here there is a problem with resources, because the hospitals may lack the facilities to keep a brain-dead patient's body alive until the organs can be removed."

Professor Thomson says the increasing rate of irreversible renal failure may be traced to chronic medical problems such as high blood pressure and diabetes. In the past, many of these patients would have died from heart failure or stroke, but today they live longer and go on to suffer renal failure. In absolute terms, though, kidney failure affects fewer patients than cancer, heart disease or motor vehicle trauma.

There has been no increase in the rate of kidney failure in younger age groups, but it is a significant problem.

"The only alternative to transplantation or dialysis is death," he says. "That may be the appropriate alternative if a patient is suffering multiple organ failure or a dementing illness such as Alzheimer's disease. It's not just a matter of keeping people alive, but keeping them functioning as normally as possible. Australian studies show that about 80 per cent of people who have a kidney transplant become fully functioning members of the community."

The chief cause of irreversible kidney failure is glomerulonephritis, a suspected auto-immune disease which results in the accumulation of protein/antibody complexes that block up and destroy the glomeruli – several million tiny filters that allow the kidneys to remove impurities from the blood.

Professor Napier Thomson (right) checks on Mrs Juliet Johnson, who considers herself lucky because she only needs dialysis twice a week. Most other patients with irreversible kidney failure visit the Alfred Hospital's dialysis centre three times a week.

"We are powerless to treat glomerulonephritis at present, but there is much research underway, including projects in my own laboratory and at the Monash Medical Centre. We are trying to understand how the disease begins, so that we might develop new ways to treat or even prevent it," Professor Thomson says.

The major research emphasis in the Department of Medicine at the Alfred Hospital is on what causes progressive scarring of the glomeruli after the onset of glomerulonephritis, and the causes of chronic transplant rejection, which produces similar symptoms.

One promising lead is the scarring that causes cells at the site to secrete growth factors. The cells produce collagen and fibrous tissue that block up the kidneys. In attempting to heal scarring, the kidney actually destroys itself.

Chronic analgesic abuse is another important cause of irreversible kidney failure, although it is no longer as important as it used to be. "Once the problem was realised, there was extensive lobbying of medical and health care professionals to ensure that they informed the community of the dangers of long-term analgesic abuse," he says. "There was a particular problem with compound analgesics such as aspirin, codeine phosphate and caffeine.

"Analgesic nephropathy takes a long time to develop, because the patient has to be taking seven to 10 tablets a day for up to 10 years before the damage becomes severe. We are beginning to see the benefit of community awareness through reduced rates of analgesic-induced nephropathy. It is responsible for about 10 per cent of all cases of irreversible kidney failure, and some of these are victims of rheumatoid arthritis that need very high doses of analgesics."

Professor Thomson says there is a serious problem with a very high rate of irreversible kidney failure among Aboriginal people. "They are particularly susceptible on two fronts: their poor socioeconomic status relative to white Australians makes them more vulnerable to diseases that cause kidney failure; and poor nutrition resulting from the westernisation of their diet results in a very high rate of diabetes, which can also lead to kidney failure."

As a result, the rate of irreversible kidney failure among Aboriginal people in western NSW, the Northern Territory and Western Australia is at least three to five times higher than among Australians of European descent.

"The isolation of Aboriginal communities compounds the problem. There is also a problem of finding suitable donor organs because their genetic background is very different from that of white Australians, so the chances of matching tissues are much smaller," Professor Thomson says.

Even with dialysis and transplantation facilities, Australians are still dying prematurely because of unrecognised kidney disease. Glomerulonephritis may not produce ill health until it is well advanced, by which time it may be too late, especially for elderly people.

Continued on Research Monash 4

Tropics tempt polar plants

How can a plant group that once grew in Antarctica now thrive in tropical New Guinea and New Caledonia? A decade of research by Dr Jenny Read has supplied some of the answers.

Dr Read checks the progress of several Nothofagus plants she is monitoring in the Monash University glasshouses on Clayton campus.

Nothofagus is a plant genus with a fossil record that tells us a lot about the past 60 million years.

Not only does its fossil record provide perhaps the best botanical evidence for the existence of the prehistoric supercontinent of Gondwana, but living *Nothofagus* species, spread over modern southern land masses, tell us about the break-up of that continent.

Living species occur in equatorial New Guinea, New Caledonia, Australia, New Zealand and the tip of Tierra Del Fuego in South America. They live in an area that spans 55 degrees of latitude.

Fossilised *Nothofagus* leaves and pollen have been found in most of these land masses, as well as in Antarctica. The southern beeches are among the most ancient of flowering plants, tracing back to the late Cretaceous period some 70 million years ago. Abundant until about 30 million years ago, they are relatively rare in Australia today. Their modern distribution related to their fossil record is enigmatic.

After a decade of research, Dr Jenny Read, an ecophysiologist with the Department of Ecology and Evolutionary Biology, has made substantial progress in unravelling some of the questions surrounding *Nothofagus*.

In 1988, Dr Read co-wrote a research paper with her former PhD supervisor, Dr Robert Hill of the University of Tasmania, and Australian National University palynologist Dr Geoff Hope. The paper posed two key questions:

- What conditions allowed several groups of *Nothofagus* that are widely separated today, both geographically and ecologically, to grow in close proximity in south-eastern Australia during the Oligocene (25 to 38 million years ago)? The most interesting example is the co-occurrence of species indistinguishable from the living *N.gunnii* (endemic to Tasmania), *N.moorei* (now only in NSW), and *Nothofagus* subgenus *Brassospora* (19 species endemic to New Guinea and New Caledonia).
- What environmental trends led to radical changes in their distribution, and to the emergence of a new, small-leaved species, *N.cunninghamii*, in the late Tertiary (about two to 10 million years ago)? This species today dominates rainforests in Tasmania and central Victoria.

Collecting specimens

Dr Read has made extensive collections of *Nothofagus* species from Australasia and South America. She has grown some 25 species in controlled-climate glasshouses, comparing their temperature tolerances, susceptibility to water stress and photosynthesis rates.

Dr Read also used the BIOCLIM computer program developed by Professor Henry Nix of the ANU to ask why the tropical *Nothofagus* subgenus *Brassospora* today grows in New Guinea and New Caledonia, but not in tropical Australia. BIOCLIM predicts where a particular type of plant or animal could occur, based on a suite of environmental parameters of its known distribution.

While BIOCLIM did not reveal the factors most important in limiting the distribution of the *Nothofagus* subgenus, it confirmed that the climatic environment of subgenus *Brassospora* is not represented in Australia today.

"*Brassospora*-type species were probably the dominant pollen-producing group in south-eastern Australia in the mid-Tertiary (30 to 50 million years ago), but declined greatly in the late-Tertiary and were thought to be extinct in this region by about 15 million years ago," Dr Read said. "However, it is now thought some may have persisted in small pockets until the early Quaternary.

"In the early- to mid-Tertiary, particularly in the Oligocene, groups of species which are now separated by 20 degrees of latitude co-occurred.

"One of the problems in attempting to relate the modern occurrence of plant groups to their past distributions is that there may have been considerable evolution since prehistoric times.

"Our conclusions can only be tentative. It is a fair assumption that their ecophysiology was similar to that of their living relatives because many *Nothofagus* leaves found in fossil deposits are almost indistinguishable from those of living species. One would expect that any major changes in ecophysiology would be reflected in changes in aspects of leaf morphology, such as size and stomatal density.

"The differences in ecophysiology that led the prehistoric groups to separate are still probably reflected in the physiology of living species."

Dr Read says the environment that allowed the two most distinctive groups of *Nothofagus* to grow in close proximity – probably a warm environment with high year-round rainfall peaking in summer – does not have a modern analogue because of the high latitude photoperiod regime, which involves long light summers and long dark winters.

Changing seasons

Australia was still separating from Antarctica and much closer to the Antarctic Circle, so that at the latitudes of Victoria and Tasmania, this type of climate intersected with pronounced seasonal changes in day length.

Rainforest, of a type and floristic diversity found today only in north-eastern Queensland, New Guinea and New Caledonia, covered large areas of south-eastern Australia at this time.

An abundance of fossilised *Nothofagus* pollen, and the occasional macrofossils – leaves and cupules (fruiting structures) – suggests that low-diversity forests dominated by *Nothofagus* occurred side-by-side with mixed-species rainforests in the pattern still seen in north-eastern NSW, south-eastern Queensland, New Guinea and New Caledonia.

Today the climate has changed radically, and the various groups of *Nothofagus* have been forced to follow, either by evolving to cope with change, or by retreating to areas of favourable habitat.

"When we compare the physiology of the modern species, the tropical species stand out from the temperate groups in some ways, yet overlap in others," Dr Read said.

New Guinea's tropical species, like *Nothofagus pullei, N.resinosa, N.carrii, N.grandis* and *N.starkenborghii*, grow in upland to montane environments between 600 and 3200 metres. *N.moorei* grows at between 500 and 1500 metres in the ranges behind the Gold Coast and south to Barrington Tops, north-west of Newcastle, while *N.cunninghamii* occurs below 1500 metres in Victoria's central highlands and in the Otways, extending down to sea level in Tasmania. *N.gunnii*, the only truly winter-deciduous tree in Australia, grows between 550 and 1450 metres in Tasmania.

Dr Read has compared the temperature range for optimal photosynthesis in all these species and found considerable overlap. The New Guinea species that grow at the highest, coolest altitudes have temperature optima well within the range of the Australian species.

According to Dr Read, the Australian and New Guinean species also differ markedly in water-use efficiency. Dr Read grew tropical and temperate species from Australia, New Guinea, New Caledonia, New Zealand and South America under identical conditions in the glasshouse to compare their water-use efficiency – a measure of photosynthetic yield per unit of water use.

Higher-latitude (temperate) species proved to be much less efficient than their tropical cousins in using water. This pattern puzzled Dr Read and Dr Farquhar because the tropical species grow in areas of high, year-round rainfall. Why evolve mechanisms to conserve water when it is so abundant?

But then Dr Read looked at some of her unanalysed data which suggest that the tropical *Nothofagus* species close their leaf stomata very quickly in response to quite small water deficits. The high-latitude species, on the other hand, keep their stomata open under much more pronounced water deficits.

"Our hypothesis is that in New Guinea water deficits are very rare and short-lived, so that closing stomata to avoid water stress is probably the cheapest way, in terms of energy costs, to avoid dehydration," she says.

"If high-latitude species did the same, the energy costs would be much higher. The plants face two problems – the warmest part of the year is also the driest, but in winter, when water is plentiful, low temperatures and reduced sunlight limit photosynthesis."

Dr Read says that for a temperate *Nothofagus* to maintain annual growth, it must keep photosynthesising in summer, even in the face of reduced water availability, so its annual water-use efficiency will remain relatively low.

Questioning proximity

So how can we account for species with very different ecophysiology growing very close together in south-eastern Australia during the Tertiary?

"The mid-Tertiary was warmer, wetter and less seasonal. It's conceivable that there could have been some niche separation between what we now regard as the tropical and high-latitude groups," she said.

"The tropical species may have occurred in protected valleys where there was less variation in temperature and humidity, while the *N.moorei*- and *N.gunnii*-type species grew on more exposed ridgetops where conditions fluctuated more widely."

Dr Read says that around 15 million years ago, southern Australia's climate slowly became cooler and drier with a marked seasonality. The less tolerant *Nothofagus* species of the *Brassospora* group, as represented by the species found today only in New Guinea and New Caledonia, became extinct in south-eastern Australia. The greater physiological tolerance of the *N.moorei*- and *N.gunnii*-type species may have been a significant pre-adaptation to the onset of more severe and variable conditions in the late Tertiary.

"These results have implications for our understanding of how past climate change affects vegetation distribution and composition.

"We need now to look at other plant groups to see if the trends recorded in *Nothofagus* are indeed indicative of a widespread phenomenon."

Exercising muscular memories

We all tell stories of our longest run, our highest jump, our fastest race. According to a team of Monash researchers, not only do our minds recall the strains of exercise – our muscles remember too.

It may seem illogical when stated so simply, but muscles remember, according to a team of Monash researchers lead by Dr Uwe Proske of the Department of Physiology.

Our muscles also inform the brain where our limbs are located in space, and how fast and in which direction they are moving.

Scientific knowledge of how muscles and nerves work together to achieve these remarkable feats is incomplete, but Dr Proske's team is helping to unravel the complex mystery of the human body.

Well known for his discoveries about the strange sixth sense that allows the platypus to detect faint electrical signals emanating from the muscles of its prey, Dr Proske is investigating how the nerves serving muscles allow them to 'remember' and respond to exercise.

He has been investigating how sensory nerve endings relay information from muscles back to the central nervous system (the brain and spinal cord).

Muscle sensory organs

Dr Proske explains that muscles possess two major sensory organs: the muscle spindle and the tendon organ. "The current dogma is that the muscle spindle informs the central nervous system about muscle length, while the tendon organ monitors muscle tension," he says.

"The brain appears to coordinate muscle movements by simultaneously monitoring muscle tension and length."

Dr Proske says the muscle spindle comprises a bundle of specialised muscle fibres lying parallel to ordinary fibres, and surrounded by a spiral of sensory nerve endings. When the muscle stretches, so does the spindle.

"The stretching of the spindle opens the spiral of nerve endings, which respond by sending a train of nerve impulses to the central nervous system. These impulses, the code of the nervous system, are deciphered by the brain as a changing muscle length," he says.

"The tendon organ has a similar design, but it is built into the tendon where it connects to the muscle fibres. While it also functions as a stretch receptor, we have found it is more concerned with the contraction of muscle fibres."

"It generates a weak stream of nerve impulses when the muscle stretches, but sends much stronger signals when the muscle contracts."

Dr Proske says that muscle spindles have an inbuilt sensitivity control. When the central nervous system instructs the muscle to move, it is the spindle that monitors progress of the movement. It feeds back information to the central nervous system about whether the movement has been executed successfully or not.

"We have been studying a curious property of muscle – that is, how the recent history of stretching and contraction affects the sensitivity of both organs, especially the muscle spindles," says Dr Proske.

He and his colleagues have found that if the muscle is stretched and then contracted before being allowed to return to its original length, the muscle spindle becomes much less sensitive than if the muscle had simply contracted without changing length (the type of muscle activity involved for example, when a person holds a weight in a fixed position against gravity).

The difference in sensitivity results from changes in the passive stiffness of the muscle fibres, which is determined by two proteins, myosin and actin – within sarcomeres, the small, elongated segments of which muscle fibres are constructed.

At a molecular level, the ability of muscles to contract is due to myosin ratcheting itself along an actin 'track' as the two molecules slide past each other.

"We have shown that when a contraction subsides, there are still some residual cross-links between myosin and actin, which impart stiffness to muscle fibres," Dr Proske says. The sum total of these residual cross-links accounts for muscle stiffness after strenuous exercise.

If muscle fibres are stretched and allowed to contract at a length longer than the original, the muscle fibres go slightly slack when the muscle is returned to its original length. But if muscle fibres are merely contracted without any change in length, there is no slackness.

This has consequences for the sensitivity of the muscle spindles. Any slack present in the muscle fibres on which the sensory spirals lie has to be taken up before the nerve ending activates and begins sending signals back to the central nervous system. A slack muscle spindle is therefore less sensitive than one that has recently had any pre-existing slack removed by a contraction only, without an accompanying stretch (see diagram).

Dr Proske says the sensitivity of the muscle sensors can be manipulated by programming the muscle's 'memory' through a series of controlled contractions.

How the spindle works

This finding, he says, has proven very useful in studying how the muscle spindle works. By stimulating muscles to contract while they are stretched, he and his colleagues have been able to induce a controlled amount of slack into muscle fibres.

"We can then take up that slack selectively by stimulating the motor nerve fibres serving the muscle. In the process, we found that the spindle basically ignores all but one of the muscle fibres that the sensory nerve endings wrap around. That sort of information helps us to understand how the spindle works," he says.

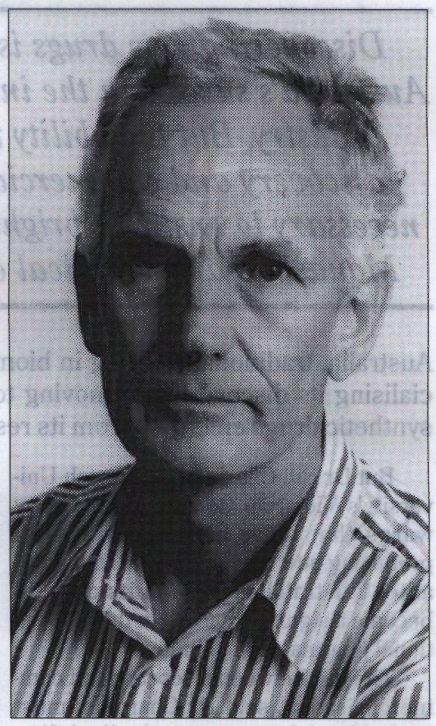
"By reducing the stretch sensitivity of the muscle spindle, we have also been able to study the tendon jerk reflex, which is controlled by the muscle sensors. If we introduce slack, the response is smaller when the tendon is tapped.

"Out of our work has come a recognition that the ongoing resting activity of the muscle spindle influences the strength of spinal reflexes. Surprisingly, if the muscle spindle is generating lots of resting activity, the reflex response becomes weaker."

Dr Proske and his colleagues have spent considerable time studying how and where the central nervous system processes the impulses coming in from the muscle spindle and the tendon organ.

Conventional thinking in the past was that the nerves from these sensors do not project to the cerebral cortex (the centre of conscious sensation), but only as far as the cerebellum, which supervises the automatic control of movement.

Signals from the muscle spindles do go to the cerebellum, but it is now known that they also go to the cerebral cortex.



Dr Uwe Proske.

Dr Proske says his group has scored a world first by showing that signals from tendon organs also go to the cerebral cortex.

His group now wants to know what the cerebral cortex is doing with this information. It seems the mid-brain filters the incoming signals in some way, so that only those arising at the onset of a muscle stretch actually reach the cerebral cortex.

Dr Proske says muscle spindles are involved in sensing the position and monitoring movement of the limbs, trunk and neck. The major role of the tendon organs, on the other hand, is to relay sensations of tension or heaviness to the brain. If the mid-brain filters out much of the signal, how do we know where in space our limbs are?

"We've used blindfolded subjects to study the effect of recent muscle history on inducing slackness in the muscle spindles. We ask them to match the position of their left arm with the right arm, and they can normally do this with an accuracy of one degree, plus or minus," he says.

"But, if we ask them to contract the muscle and we then passively shorten it to introduce slackness, they make errors of up to 10 degrees when they try to match it to the position of the other arm."

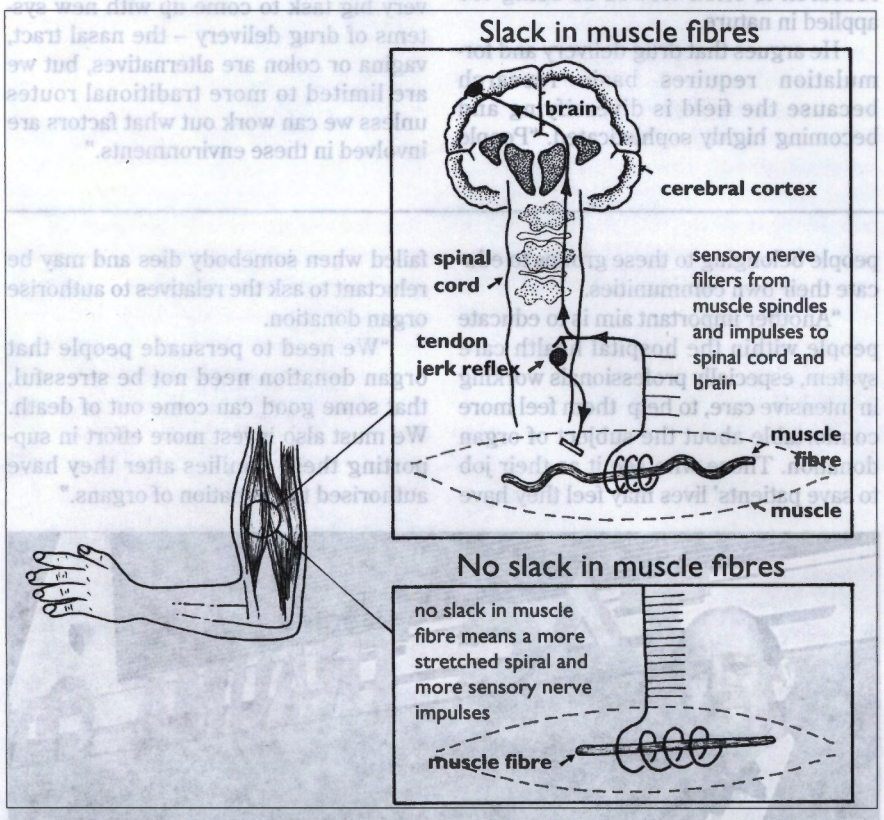
Testing reflexes

Whenever a doctor tests a patient's reflexes, says Dr Proske, the response varies considerably. This is because the magnitude of the response is strongly influenced by the muscle's recent history. "That's why we say muscle has a memory," he says.

"This result has functional implications. We suspect that the stiffness changes that occur in muscle may be important when an athlete is warming up before a sporting event. By stretching their muscles before the event, athletes may be minimising passive stiffness, thereby ensuring they get the predictable responses required for peak performance."

This work earned Dr Proske the medical faculty research prize last year.

The research group includes Emeritus Professor Archie McIntyre; senior research fellow, Dr Ed Gregory; reader, Dr David Morgan; and senior lecturer, Dr John Rawson.



When the spiral sensory ending of a spindle lies on a taut muscle fibre (lower right), the spirals are opened out and a dense stream of impulses travels up to the spinal cord and brain. When the muscle fibre is slack (upper right), the spirals are closed and impulses trickle at a lower rate.

Bridging the pharmaceutical gap

Discovering new drugs is not enough to guarantee Australia's success in the international pharmaceutical industry. But the ability to bridge the gap between discovery and commercialisation of a new drug is necessary to ensure a bright future for the industry, says Monash pharmaceutical chemist Dr Bill Charman.

Australia, traditionally strong in biomedical research but poor in commercialising its discoveries, is moving to capitalise on new gene-derived and synthetic drugs emerging from its research institutions.

But Dr Bill Charman of Monash University's Victorian College of Pharmacy warns that ideas and discoveries of promising new compounds will not guarantee Australia success in its drive to become a significant force in the international pharmaceutical industry.

The gap between discovery and commercialisation, said Dr Charman, must be bridged by a research discipline called pharmaceutics. Although fundamental to the drug industry overseas, pharmaceutics is poorly understood and appreciated in Australia.

Dr Charman said pharmaceutics is a discipline with its roots in physical chemistry that bridges the gap between the chemistry and biological interfaces. It deals with analytical chemistry and stability issues, how to formulate new drugs in appropriate delivery systems, the absorption and metabolism of drugs by the body, and the development of strategies to deliver drugs selectively to their site of action.

Dr Charman studied pharmacy at the Victorian College of Pharmacy and obtained his PhD in pharmaceutical chemistry from the University of Kansas in the US. He later worked as a researcher for the multinational drug company Stirling Drug Inc. before returning to Australia to become senior lecturer in pharmaceutics at the Victorian College of Pharmacy.

He said that drugs entering world markets are very different from those of two decades ago. In the past, drugs were largely discovered by screening thousands of chemical compounds. Today's drugs are more likely to be the product of a human gene, or a synthetic molecule derived from some natural prototype with known biological activity.

"Until about 25 years ago, pharmaceutics was very much about making tablets," he said. "Nowadays, its role in pharmaceutical companies is to provide feedback into drug discovery, in terms of choosing the correct molecule, how best to formulate and deliver it, and how best to approach its preclinical development. Pharmaceutics is particularly relevant to drugs coming out of fields like biotechnology and protein engineering.

"Today's drugs must be designed and formulated so that they are absorbed efficiently, remain stable in the serum, and target their intended site of action. The body's own chemistry is an important consideration as metabolism of the drug can also be viewed as a component of drug delivery," Dr Charman said. "If a compound is highly metabolised, it's not going to be a good candidate drug, and therefore it may require redesigning to be more stable.

"In the past, it was a matter of observing activity, getting the molecule, and then handing it over for commercial development. Because of the enormous costs involved in identifying an active compound, it's often harder to give up on a molecule than to start the whole process again. This can happen where somebody has dedicated their career to taking a molecule through the discovery pathway – they're going to be reluctant to give it up for a better option," he said.

"Today a compound is evaluated on many more things than just its activity. You need to ask questions such as: 'Do you administer it orally or by injection? Does it have extended metabolism? Do you have a delivery system that fully realises its full therapeutic potential? How stable and soluble is the drug?'"

Dr Charman said the world's most widely used drug, aspirin, illustrates the complex issues surrounding drug design and delivery. For headache relief, high doses of aspirin are used in a rapid release tablet or a solution formulation. However, lower doses of aspirin have been shown to be effective in treating heart attack. Some of Dr Charman's research has shown that by altering the rate at which low doses of aspirin are administered to humans, certain important biochemical advantages can be gained in the body. The clinical benefits of achieving these biochemical advantages are currently being evaluated in clinical trials in England.

Pharmaceutics offers drug companies scientifically based criteria for selecting the one compound among 10 that is likely to make it through the enormously expensive process of development, testing and commercialisation. It is impossible to get a compound approved unless it has a selective activity profile, a good side-effect profile, and it can reproduce its clinical effect.

"People with a development mindset are vital if we are going to succeed. You can make a lot of discoveries, but unless you know the hurdles that new compounds have to get over, you're going to get caught. The most enlightened drug companies in the US try to have their developmental work moving parallel to their early discovery research efforts.

"The cost of drug development is so high that if you're behind in discovering a problem with your compound, it may be too late. You may have spent tens of millions of dollars. Compounds that almost made it tend to stick around, and good money follows bad in trying to resurrect compounds for which development should not have been undertaken."

"People with a development mindset are vital if we are going to succeed."

Dr Charman said that despite the importance of pharmaceutics to the commercial success of any Australian drug company, it is difficult to obtain grants for pharmaceutics research from bodies like the Australian Research Council or the National Health and Medical Research Council, because the research is often viewed as being too applied in nature.

He argues that drug delivery and formulation requires basic research because the field is diversifying and becoming highly sophisticated. "People are now exploring techniques like cell-surface recognition systems and antibodies to deliver drugs to the site of action," he said.

"Today's drugs must be designed so that they are absorbed efficiently, remain stable in the serum, and target their intended site of action," Dr Bill Charman says.

One very promising delivery route being explored by Dr Charman's research group is to use the body's lymphatic system as a means for delivering and targeting drugs. Many drugs can be specifically formulated to be absorbed and distributed via the lymphatic system, avoiding the so-called 'first pass' phenomenon that affects many orally administered drugs.

When administered orally, drugs must pass through the liver before they reach the general circulation in the body and then their target tissues. Up to 99 per cent of the original dose of a steroid hormone such as testosterone may be broken down in the liver before it reaches its cellular targets.

"Big companies like Merck and Genentech are putting huge amounts of money into drug delivery research. It's a very big task to come up with new systems of drug delivery – the nasal tract, vagina or colon are alternatives, but we are limited to more traditional routes unless we can work out what factors are involved in these environments."

Kidney supply down

From Research Monash 1

The solution, says Professor Thomson, lies in improving the rate of organ donation: "Currently, the rate is about 11 to 12 donors per million of population. To satisfy demand, we need to improve this to around 17 to 20 per million."

Organisations like the Australian Kidney Foundation (AKF) are working with medical authorities to maximise public awareness of the need for people to become organ donors. The AKF has set up a program in secondary schools to educate students in Years 9, 10 and 11 about organ donation, including the biology of transplantation, and the ethical, economic and political issues surrounding transplantation.

"We are trying to persuade people that organ donation is a part of dying, and that it is not distasteful. We accept that some people find the thought of organ donation disturbing," Professor Thomson says. "Obviously, we tread a fine line between educating and brainwashing, so we give all students the opportunity to make up their own minds.

"We launched the program nine months ago, and already it is in 15 per cent of Victorian schools. By monitoring student attitudes with questionnaires, the program's effectiveness will be assessed.

"Another thing we have to do is educate ethnic groups. Many do not become organ donors because they either lack understanding of the issues or have language difficulties. As with Aboriginal people, many of these ethnic groups, especially those of Asian origin, are disadvantaged because of the tissue-matching problem. We are encouraging people belonging to these groups to educate their own communities.

"Another important aim is to educate people within the hospital health care system, especially professionals working in intensive care, to help them feel more comfortable about the subject of organ donation. Those who see it as their job to save patients' lives may feel they have failed when somebody dies and may be reluctant to ask the relatives to authorise organ donation.

"We need to persuade people that organ donation need not be stressful, that some good can come out of death. We must also invest more effort in supporting these families after they have authorised the donation of organs."

"Victoria's success in cutting its road accident rate has dramatically reduced the rate of organ transplantation," says Professor Napier Thomson.

Changing hobby horses

THE NEW DIRECTOR of the Monash Sports and Recreation Association on Clayton campus has an enviable position – he has been able to turn his hobby into a job.

Mr John Campbell, a keen sportsman with a passion for basketball, changed his career midstream five years ago when he moved out of computing and into sporting administration.

"I had always been actively involved in various sporting committees, and the opportunity came up to take over as director of the Sports and Recreation Association at Melbourne University," Mr Campbell explained. "It was a chance to move into management and combine my career with my personal interests."

Although he admits the change in direction did seem extreme at the outset, an understanding of computing and "a certain amount of numerical literacy" is invaluable in any job. "For me there has been a crossover of skills," he said.

Mr Campbell says he was attracted to the job at Monash because of the university's good reputation.

"The Monash Sports and Recreation Association is very well regarded in the university sports arena, because of the quality of its competitive teams and the standard of its facilities," he said.

"Foundation director Doug Ellis was a prime mover in the Australian University Sports Federation. I hope to build on that reputation."

Mr Campbell and his team of 27 permanent and over 150 sessional staff oversee all indoor and outdoor sporting facilities on Clayton campus. These include the 25-metre indoor swimming pool, 12 plexi-pave tennis courts, 13 squash courts, fitness gymnasium, physiotherapy service and sports shop. More than 50 sports clubs use the facilities and support services offered by the association.

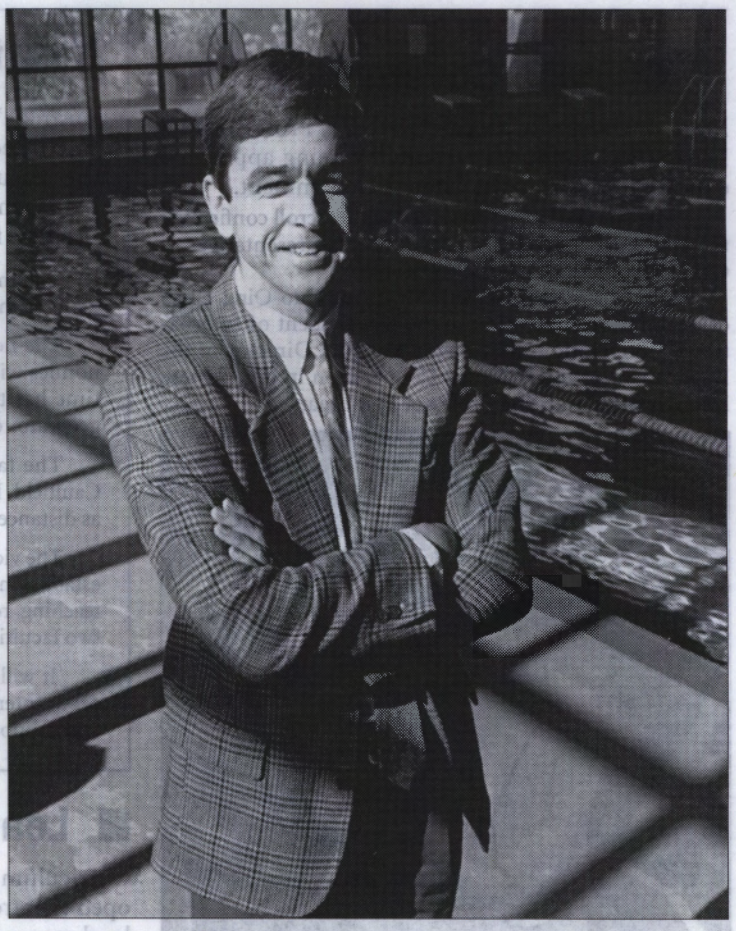
Mr Campbell says Monash students have the best chance to try a huge range of sporting activities. Activities offered by the clubs include aikido, in-line skating, fencing, archery, billiards, board-riding, water polo and skydiving.

"There is a great variety of sporting opportunities at reasonable costs," he said. "Many university students discover sporting interests that will last them the rest of their lives."

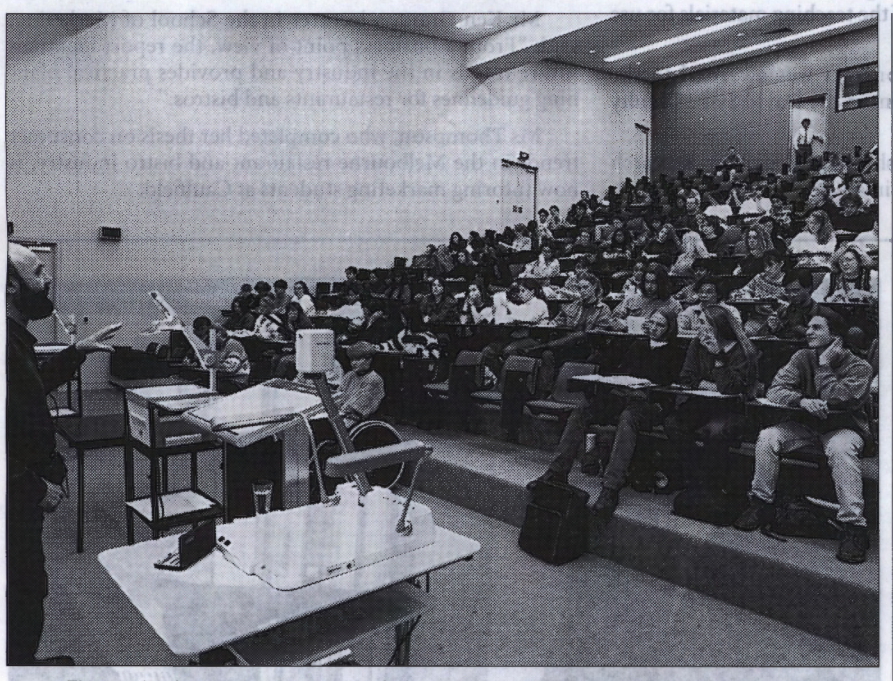
"In addition to those club-based activities, a range of general recreational activities for the casual participant are also on offer, including aerobics, circuit training, tennis, swimming and self-defence classes."

The association aims to provide Monash students and staff with comprehensive sporting and physical recreation facilities, services and opportunities. Where possible, facilities such as the swimming pool are also available to the local community.

The Monash Sports and Recreation Centre is in the eastern corner of the Clayton campus. It is open Mondays to Sundays from 8 am to 11 pm. Inquiries can be directed to the general office on extn 75 4111.



New Sports and Recreation Association director Mr Campbell has turned his hobby into a job.



Electronic gizmos dominate today's lecture theatres such as South One theatre.

Theatres go hi-tech

THE DAYS of chalk and blackboards on campus are fading as state-of-the-art lecture theatres become commonplace.

The trend can be seen at Monash, where hi-tech theatres opened last year on Frankston and Clayton campuses and the Alfred Hospital. Two theatres are planned for Caulfield campus.

The chief technical officer of the Teaching Services Unit (TSU), Mr Graeme Ivey, believes the new lecture theatres are an excellent teaching resource. "They boast state-of-the-art equipment, which makes teaching and learning very comfortable," he said.

A computer, visualiser graphics and video, which all feed through the television projection system on to the front wall, can be selected by remote control switching systems built into the lectern or hand-control unit.

Clayton campus has two identical new theatres, both of which boast technical equipment worth nearly $100,000. South One, which seats 400 people, is in the Medicine building (building 64), and Central One, which is in the Computing and Information Technology building (building 63), seats up to 325 people.

The theatres contain advanced technical equipment including 35mm dual slide projection, vision switcher/TV data projectors, SVHS/VHS video replay, visualiser (TV camera), IBM vga computer interface, audio cassette replay and recording, two overhead projectors, hand-held remote controllers, lecterns with remote control function and microphone, and lapel radio microphone systems. The theatres also have a house lighting system, complete with spotlights to illuminate workstations.

TSU, which designed the theatres with the Buildings and Development Branch, also train staff in the use of the audio-visual equipment.

South One is supported by a full-time technician, Mr Trevor Annells, but Central One is not staffed, so training is essential for staff wishing to use the theatre's resources to best advantage.

"The theatres are a university-wide resource and staff should make full use of the excellent teaching facilities," he said.

Bookings for the lecture theatres can be made through the Facilities and Conference Office on extn 75 5733. For information about technical training, call Mr Graeme Ivey on extn 75 3287. Mr Trevor Annells may be contacted on extn 75 4058.

Study reveals fewer homeless youths

COUNTING the number of homeless youth each night is no easy task. But a new method of calculating the shifting population developed by Monash in collaboration with RMIT has revealed that the figure is considerably less than previously estimated.

The difficulty in assessing the number of homeless youth in Australia each night is reflected in the conflicting results of recent studies. Some reports say the figure is about 20,000, others say it is closer to 70,000.

Monash senior lecturer in sociology Dr Chris Chamberlain and RMIT lecturer Mr David McKenzie say the figure is actually between 15,000 and 19,000.

The two academics have developed a method to count the continually changing homeless youth population. They use information from two sources: a census count of persons in Supported Assistance Accommodation Program (SAAP) services in Victoria, and a sample of more than 2000 young people aged between 12 and 24 who were homeless at some point in 1990 and 1991.

The SAAP program funds accommodation in refuges, hostels, youth housing programs, emergency accommodation in large hostels and services for families.

Their approach defines the homeless population as people:

- living permanently in single rooms in private boarding houses without their own bathroom, kitchen or security of tenure;
- moving between various forms of temporary shelter including friends, relatives, youth refuges, night shelters, boarding houses, hostels, and other forms of emergency procedures; and
- living without conventional accommodation (on streets, in deserted buildings, railway carriages, under bridges, and so on).

Dr Chamberlain said: "This kind of study using the responses and statistics from SAAP does not cover young people living on the streets or in squats, nor does it include those staying temporarily with friends or relatives and those using temporary accommodation outside of SAAP services.

"But it was possible to estimate the size of the total homeless population. Our results suggest that a minimum of 20 per cent and a maximum of 33 per cent of homeless young people were accommodated in SAAP services on census night.

"Using these percentages, we took the base figure of 1092 in SAAP services in Victoria in May 1991 and then scaled up to a national figure taking into account those outside SAAP. This resulted in a maximum estimate of 21,000 and a minimum estimate of 12,750.

Using the preferred range of 22 to 28 per cent, the most realistic estimate we arrived at was between 15,000 and 19,000.

"We knew that publishing such a reduced figure would be controversial and sensitive. Homeless and support agencies often use the estimate of 70,000 as a basis for making claims for resources and funds."

> "The figure we came up with, while still large, is not as daunting."

Dr Chamberlain and Mr Mackenzie argue that for policy and planning reasons, as well as general concern, the numbers must be realistic to ensure effective planning to solve this long-term problem. "The figure we came up with, while still large, is not as daunting or insurmountable," Dr Chamberlain said.

From all reports, the new method of calculation has been accepted. The new figures have been quoted by government departments and agencies like the Salvation Army.

"Because the homeless population is continuously changing, these figures must be seen as an indication of the population for 1991.

In a few years, another study should be done to indicate its growth or decline," Dr Chamberlain said.

Further to this statistical report, Dr Chamberlain has qualitative data on almost 2000 homeless young people and will publish these accounts soon.

▼ V-C honoured by Chinese Government

Monash University's vice-chancellor, Professor Mal Logan, was honoured recently by being appointed education adviser to the Chinese Government.

Professor Logan was presented with a scroll confirming the appointment at a presentation by representatives of China's Ministry of Labour last month.

Pictured below: (from left) Mr Zhang Guo-Qing, Chief of Technical Cooperation in the Department of International Cooperation; Mrs Zhang Youyun, Director of the Department of International Cooperation in the Chinese Ministry of Labour; and Professor Mal Logan.

New faculty leads the way

Australia's largest business education centre will be created when Monash University combines the Faculty of Economics Commerce and Management with the David Syme Faculty of Business from 1 July.

The massive revamp is expected to provide students in the new faculty with added advantages.

The newly formed Faculty of Business and Economics will involve more than 7500 students and in time has the potential to become Australia's main generator of business leaders in future generations.

The faculty will offer courses on the Clayton, Caulfield, Frankston and Gippsland campuses, as well as distance education programs.

The vice-chancellor, Professor Mal Logan, said the establishment of a single faculty would strengthen the teaching, research and policy attributes of the previous two faculties.

'It will also permit an environment in which vigorous interaction between different cultures can foster and support a new excellence,' Professor Logan said.

■ Learning about leadership

Curriculum and teaching materials are being developed to introduce the study of leadership to graduate level management courses.

The industry taskforce appointed by the Department of Employment Education and Training to review management programs in higher education has commissioned the development of the teaching materials for use around Australia.

The keenly contested contract was awarded to the Monash School of Management in the David Syme Faculty of Business.

The director of the Monash Syme Leadership Research Unit, Dr James Sarros, will be involved in the project.

▲ Top business student wins bank prize

Monash University's top business honours student for 1992, Ms Kara Lee Thompson, has been awarded the Bank of Melbourne prize.

Ms Thompson's report identified nine consumer trends in the restaurant and bistro industry, including two critical trends of value-for-money and the move towards more traditional cuisines and food.

Mr Ken Grant, a lecturer in the School of Marketing, said: "From a business point of view, the report identifies future trends in the industry and provides practical planning guidelines for restaurants and bistros."

Ms Thompson, who completed her thesis on consumer trends in the Melbourne restaurant and bistro industry, is now tutoring marketing students at Caulfield.

■ Wine study focuses on cooler climates

Different wines should be served at different temperatures. But what climate provides the best environment for the growing of wine grapes?

A study investigating the potential of Victoria's cool-climate wine-producing regions is about to be undertaken by the recently established Monash Syme Mornington Peninsula Research Unit, based on Frankston campus.

The study, commissioned by the Mornington Peninsula Business Council and the Mornington Peninsula Vignerons' Association, will focus on the unique education and training requirements of the cool climate industry.

From a handful of grape growers in the early 1970s, the Mornington Peninsula wine industry now boasts more than 90 producers of chardonnay, pinot noir, and cabernet sauvignon varieties.

Senior lecturer in marketing and leader of the research team, Dr Bill Schroder, says the agreeable peninsula climate is ideal for producing quality table wines.

Current vigneron training programs, however, do not take into account the special conditions of cool climate regions.

For example, there are indications that the peninsula is one of the best regions in Australia for growing pinot noir, but a greater understanding of the effects of climate is needed to realise the potential.

The study will begin with a conference next month that will seek feedback from the industry on research requirements.

Vignerons will be invited from regions including the Yarra Valley, Bellarine Peninsula, Gippsland and Tasmania.

Community medicine in demand

Simple, easy-to-read medical books for general practitioners, health workers, students, and even non-medical people are in demand. And Associate Professor John Murtagh of the Department of Community Medicine has been doing his part to meet the need.

During the past four years, Dr Murtagh has devoted all his spare time to writing. So far he has produced five books, several of which have sold out and are in third and fourth print runs. Others are being published in foreign languages. Dr Murtagh, who is acting head of Community Medicine at East Bentleigh, says the response to his books – which include *Patient education, Practice tips* and *Cautionary tales* – has been unprecedented. A text on general practice will be completed by the end of the year.

"The books have sold very well and the sales have been beyond my modest expectations," Dr Murtagh said. "There is obviously a demand for simple, easy-to-read books to which non-medical people can relate."

Patient education, now into its fourth print run, sold out within 18 months. The book gives doctors and health workers practical information to pass onto their patients. *Practice tips* gives medical students, interns, residents and family practitioners simple, easy-to-follow instructions, complete with diagrams. A feature of the book is that the tips are simple and safe to perform, requiring minimal equipment and technical know-how.

Premier Jeff Kennett presents the inaugural Peter Kerr Scholarship to Monash student Ms Emma Belbin.

▲ New award honours Gippsland scholar

The Premier of Victoria, Mr Jeff Kennett, last month presented the inaugural Peter Kerr Scholarship to Monash University student, Ms Emma Belbin.

The annual scholarship, worth $4000, honours the life and work of the late Dr Peter Kerr, a former lecturer in politics at Gippsland.

It was established to provide opportunities for Gippsland campus social science students to undertake postgraduate studies.

Ms Belbin, who completed a double major in psychology and management, is undertaking a graduate diploma in applied psychology at Caulfield campus this year.

She hopes to enter a masters program in 1994 and then complete a PhD. "The scholarship will help alleviate some financial difficulties and allow me to devote more time to my studies," she said.

"It is an honour to receive a scholarship awarded in memory of someone with strong Gippsland links, and I hope I will be able to emulate Dr Kerr's academic achievements."

Dr Kerr was also a senior political adviser and director of the Institute of Public Affairs. He obtained his higher degree from Monash.

A Monash sitcom? You must be joking!

The cast of *Wellington Road:* (clockwise from front left) Matt Elsbury, Tracy Foster, Carson Ellis, Kelly Baldwin (centre), Ronald Teo, Judy Taylor, Julian Beckedahl and Ashleigh Jurberg.

Monash University featured in a new Australian situation comedy broadcast on the mythical UTV8 last month. Based on personalities and gossip around Clayton campus, *Wellington Road* was performed and filmed in front of a live audience at the Union Theatre.

But the comedy was not produced by the likes of Crawford or Grundy. Student Theatre's new work was totally inspired, devised and produced on campus.

Artistic director and coordinator of the project, Mr Trevor Major, says the project was an exciting new initiative for Monash.

"Developing *Wellington Road* was a new way of interpreting life around Monash. The inspiration came directly from the general atmosphere around Monash – the gossip and goings on," he said.

"When I started research on sitcoms and how they were developed, I saw that Monash was a perfect vehicle if we could get the right location, situation and storyline. Most sitcoms revolve around a family or a symbolic domestic situation. Our group of writers designated that the Halls of Residence was the perfect setting."

Wellington Road was developed from interviews with students and staff at the halls. "Our characters come from real people," says Mr Major. "Muzza, the Bairnsdale boy; Kym, the assertive, intelligent medical student; Williams the bookworm; Frenke the tutor; Ms Drakhon the warden; and Robert Kingscliffe III.

"In addition to auditioning a cast, I also assembled a crew to produce the sitcom. They researched other production crews, interviewed Crawford's representatives, and saw a few tapings of 'All Together Now!'

"The best thing about doing a show like *Wellington Road* is that for some of the cast involved, it was their first time on stage.

"The beauty of a sitcom is that we could make mistakes and not have to worry about losing lines. When this happened, the production crew would swing into action and make it funny."

Mr Major believes that the concept of *Wellington Road* has potential for future episodes. There are so many issues on campus that could be explored. I would like to come back to Monash in 10 years and see that 30 episodes have been made.

Clayton joins literary ranks

Gerald Murnane depicted it in prose, Laurie Duggan immortalised it in poem. It is Clayton, a typical Melbourne suburb that has achieved special mention in an authoritative new literary reference.

Disguised as 'Accrington' in Murnane's *A lifetime on clouds* and appearing under its own name in Duggan's poem 'Adventures in Paradise', Clayton is one of more than 900 Australian places appearing in the new edition of *The Oxford literary guide to Australia.*

The 500-page guide – which contains locations as disparate, or desperate, as Antarctica and a small outback town called Nevertire – maps the terrain of Australian letters. Its editor is Mr Peter Pierce, who is a senior lecturer in the National Centre for Australian Studies.

To reach its pages, a place must first have literary attachments – "where writers lived, died, or went to school," Mr Pierce says.

"It doesn't really matter whether they were writing directly about a place, transmuting it, or even using it as a point of reference.

"Nothing has been neglected. The work could be a ballad, book, poem, song journal and so on."

The first edition, published in 1987, sold out quickly. The paperback edition, a sports version of the original hardback, was published in March.

"The guide was very much built from the ground up. No Australian equivalent existed, we only had British and US prototypes to go on," Mr Pierce says. "Beginning in 1983, working parties were set up in all states, and we received much help from Australian writers, particularly the poet Les Murray, who seemed to have travelled everywhere.

"It was interesting to note how some states in Australia have particularly defined literary regions, such as Monaro (A. B. 'Banjo' Paterson, Miles Franklin, David Hancock), the Riverina (Rolf Boldrewood, Joseph Furphy, Mary Gilmore) and even the Great Barrier Reef (Mark O'Connor, Morris West, Judith Wright)."

Mr Pierce hopes the new edition will fire the imagination of Australian readers, particularly those who have so far neglected the writers of the early to mid-19th century.

"We are finding out now how rich the 19th century was in literary tradition. The books written in the 100 years or so before the 1890s have always tended to be disparaged. But this was the time when popular authors like Rolf Boldrewood were writing. It would be good to see them make a comeback and their books reprinted."

Editor of *The Oxford literary guide to Australia,* Mr Peter Pierce.

Station manager Mr Peter Freeland (right) looks on as Monash student Mr Sean Elliot selects another tune.

Transmitting solo

It may sound the same, but Monash University's radio station 3MU has undergone a major transformation in the past 12 months.

The station has recently bought its first transmitter and new recording, dubbing and broadcasting equipment.

Recent changes in legislation – plus the transmitter – means that 3MU will be able to broadcast outside the university for longer periods in future. "In 1995 we hope to get approval for a permanent licence," says station manager Mr Peter Freeland.

"Broadcasters are interested in getting an uncensored message across and playing their own music. It is such an exciting medium."

The station runs a diversity of programs including jazz, rock, classical, talk-back and more. It broadcasts across Clayton campus from 8 am to 6.15 pm five days a week, with occasional programs on weekends. This year, 3MU has a licence to broadcast to the wider community for 90 days.

The next external broadcast period will run from 24 July to 10 October. The station broadcasts on 95.7FM, and may be picked up in most areas of Melbourne. Although a Monash initiative, 3MU serves the local community and encourages them to use the station for programming, broadcasting and recording.

The station has an extensive collection of music from the 1960s through to the 1990s. "We also have a huge collection of demo tapes from bands," Mr Freeland says. "I am very interested in developing this collection into a regional archive."

In addition to programming and broadcasting, 3MU offers two courses – *Basic radio skills* and *Sound engineering* for staff and students.

Program applications for the July broadcast are now available.

Is Australian professional education truly Australian?

A recent survey by Monash's National Centre for Australian Studies has assessed the level of Australian course-related material used in a range of teaching disciplines. More than half the respondents said that less than 40 per cent of teaching materials used in their courses was produced locally. More than a quarter of respondents put the figure at less than 20 per cent.

Although most respondents agreed that more Australian material would improve their courses, some professions feel that facts are facts, and that Australia is intrinsically no different from the rest of the world.

The issue of 'how Australian is professional education in Australia?' led to a forum as part of the Ideas for Australia program, held in May with the assistance of Monash's National Centre for Australian Studies.

The result is a discussion paper and 19 proposals for action that, according to program chairman Emeritus Professor Donald Horne, should be considered by all those who teach.

He believes the forum will have been a waste of time unless organisations involved in professional education continue to discuss these issues among themselves.

Montage reproduces below extracts from the final report of the forum, and invites letters and comment from Monash staff and students. Letters may be directed to the Editor, *Montage*, 1st floor, Annexe 2, Administration Building, Clayton campus, or fax (75) 2097.

Forum extracts

"Courses in public administration in Australia went without an Australian textbook for a whole decade during the 1980s. Even today, one widely used human resource management text is actually a North American text interspersed with articles from Australian newspapers. The body of the book is largely unaltered."

"What does this shortage of local material mean for professionals graduating from Australian universities and entering the workforce?"

"All people concerned with professional education face historical and contemporary hurdles to developing Australian material. Specific difficulties are encountered by professions which already have a long academic tradition. Law is a most obvious example. In one sense, virtually all the material used in Australian law schools is 'Australian', at least since the right of appeal to the British Privy Council was finally abolished in 1986."

"The case law is Australian, the institutions, judges, magistrates and litigants are overwhelmingly Australian. The incidents described are Australian, but what does a study of this mass of literature teach a student about the complexity of a society? There have been no strong traditions of specifically Australian intellectual discussion of High Court and other decisions. We must have them now."

"Perhaps what has to be recognised above all is that the professions, including the traditional ones like law, engineering and medicine, which pride themselves on their reliance on logic and incontrovertible 'facts', are social activities, carried out in an Australian social, legal, geographical, political and environmental context."

Ideas for Australia
National Centre for Australian Studies
Monash Univcrsity

"Other professions, such as journalism, tourism and policing, are new to academia and face slightly different problems to the traditional academic professions. Some, such as project management, can even be regarded as truly new professions, with little formal history of professional development inside or outside academia."

"In business management there can be extraordinary belief that somehow the theory and practice of business management is 'international' as if it were physics."

"The old-style journalist, trained under the cadetship system, often has scant regard for the graduate's grasp of public opinion formation, mass media theories and the sociology of communication, let alone for a list of degree subjects incorporating psychology, marketing, anthropology and politics. Real journalism is about getting stories on the street, it is argued, not about intellectualising one's role in news formation."

"Policing is a profession in which this anti-intellectual, anti-theoretical attitude used to be quite prevalent. An academic research culture about policing is now emerging from within the various services and also from the universities, but only now are the first texts about Australian policing being published as a basis for teaching."

"Professionals, whether they are police officers, nurses, teachers, or tourism managers, will continue to play an important part in redefining Australia and preparing it for the future. They will play a large part in determining what direction that future takes. It behoves Australia as a nation to equip them for that task. For example, if resource management students are to become the custodians of the country's resources, surely they should see science as a social activity, driven by and driving the society which supports it, a society, moreover, in which the position of science is still largely ambiguous."

Tourism and the environment

"Similarly, is it proper that while tourism courses teach students everything about itinerary and tour development, they should teach little about the culture of the land that those travel consultants of tomorrow will be 'selling', or about the effects of tourism on national self-image?"

"Why is it that the academic study of tourism has scarcely concerned itself with the effects of tourism on the environment? Oddly, there is very little concern in tourism studies with cultural tourism or even general sightseeing. It is alarming that one of the newest tourism textbooks on the market has no information at all on indigenous people, and no sense at all that the needs of clients might vary according to age, gender, or ethnic background. It is a highly technical handbook, bereft of social, cultural, biological and physical landscapes."

"No body of knowledge can be right for all places and all seasons because knowledge alters as the society it supports changes. Many educators of professionals have been slow to recognise that the technological developments that shape their professions are mirrored by social, political and economic changes in every other area and every other profession. Without at least some knowledge of this dynamism and its history, how can professionals hope to attend to their work critically, or help their professions change intellectually as well as technically?"

"The imperative to provide professional education in an Australian context varies in its intensity from profession to profession, but is absent from none."

For a copy of the discussion paper and proposals for action arising from the forum, contact the National Centre for Australian Studies on extn 75 5241.

How to make an exhibition of yourself

Surveys show that attendance at an open day has a significant influence on a student's choice of university. Monash marketing manager Ms Susanne Hatherley offers advice on effective – and cost-effective – approaches to open day exhibits.

The most important element of Open Day doesn't cost a cent. The tens of thousands of people who come onto our campuses on Open Day first and foremost want to be greeted with a smile.

Open Day is our chance to put a human face, preferably a welcoming one, to the image of the university, which is promoted via more impersonal media such as brochures, magazines and newspapers, throughout the year. This is the one day of the year when we can showcase the university's activities, facilities and people.

For many of our visitors, Open Day is their first close encounter with a university. A 1992 survey by the Higher Education and Advisory Research Unit (HEARU) revealed that less than 25 per cent of parents of first-year students had studied for a bachelor degree. So in many instances this is the first visit to a campus for parents as well as potential students.

No wonder feedback from the 1992 Open Day Survey revealed that most visitors found the array of buildings and the size of campuses overwhelming and confusing.

Our first task on Open Day is to help our visitors overcome this sense of intimidation. Anyone who has wandered around the campus on Open Day will have heard the plaintive cries: "Do you suppose we should be here?" or "Where are we anyway?"

Our student guides, in their distinctive academic gowns, do an excellent job of meeting and greeting our visitors. This year we will have about 100 guides and parking attendants on Clayton, Caulfield and Frankston campuses. In addition, Clayton and Caulfield campus will have central counselling areas, which will provide a hub from which visitors can explore the campuses in the company of experienced guides.

Faculties might also consider delegating representatives to stand at major access points to greet and guide visitors once they have entered the faculty buildings. Our buildings can appear maze-like to the novice, and this courtesy can make all the difference between a positive and a negative impression. Ultimately, a friendly face is going to be more effective than the brightest, boldest sign.

Faculties can also make it easy for visitors by focusing activities in central, easily located areas, instead of spreading their exhibits throughout a building.

When planning displays, it is also wise to keep in mind the requirements of your audience. Most people will only spend one or two hours on the campus. Their first objective is to gain an overall impression of Monash. Displays should offer an intriguing and interesting insight into the teaching and research activities of the university. They should invite interaction with academics, students, and general staff. Knowledgeable people should be on hand to explain a particular display and put it in the context of the university's role in the community.

Static displays that do not offer the opportunity for human contact are less successful than hands-on displays. People come on campus to meet our professors, chat with our students, and have their questions answered by our counsellors. No wonder that our most popular displays include the blood pressure and blood sugar testing offered by nursing on Frankston campus, the chemical magic show presented by science at Clayton, and the visual arts students' life drawing class on Caulfield campus.

Other winning activities include a demonstration of fabric painting by visual arts students, car crash testing by engineering staff and students, and a demonstration of robots run by Computing And Information Technology. All these displays leave visitors with the impression that the university is a place of action, interest and excitement.

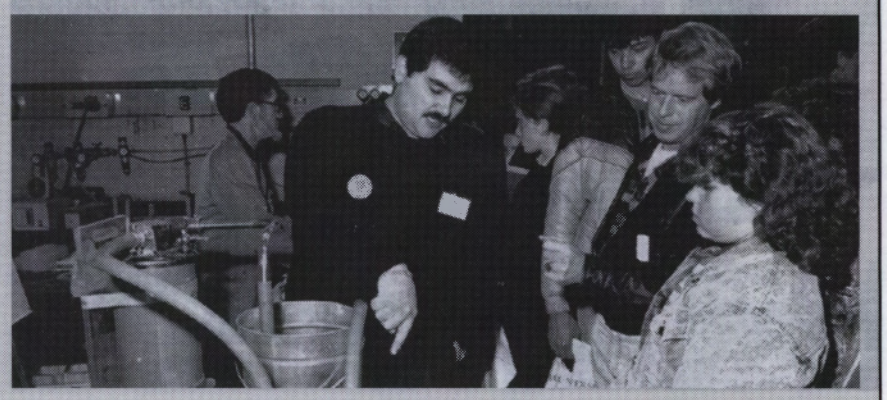
Of course, some courses do not lend themselves to stimulating visual demonstrations. In 1993 our emphasis is on quality not quantity. If the best you can manage is a hand-made poster display, forget the posters and ask some of your students to be available to talk about their projects. The opportunity to talk to "real live students and academics" is more important to our visitors than the chance to read a confusing array of posters. Hearing about a project, first-hand, is always more interesting than reading about it.

Simple ideas such as 'Ask me about Monash' badges are more effective than four-colour posters. Alternatively , offering an informative 20-minute lecture may be more effective than running a video on an endless loop. After all, many of our visitors have never had the opportunity to sit in a lecture theatre and listen to a lecture, but they can watch a television screen any night.

We will have succeeded in presenting our best face to the public if each person saw or heard something that stimulated their interest and gave them a greater understanding of the role of Monash University.

Members of the Marketing Unit, in the Office of University Development, are available to advise departments, centres and faculties on their Open Day activities.

For further information, contact Ms Susanne Hatherley on extn 75 3087.



Engineering an effective and interactive Open Day display.

Teachers find sanctuary, jobs

Thirteen new Australian residents last year took part in a successful pilot program to upgrade their professional teaching qualifications. This year, their success has been in finding work.

Overseas trained teachers from nine countries – including Russia, Croatia, Hungary, Peru, Thailand, El Salvador and the UK – completed the one-year intensive program to qualify them to teach in early childhood centres in Australia. Most have since found work in child care centres, kindergartens or are undertaking further study.

Monash, the first university in Australia to offer the Overseas Trained Teachers (OTT) program, has received a $105,000 grant for the first three years of the program.

The program coordinator in the School of Early Childhood and Primary Education, Ms Anne Kennedy, says the program is unique.

"The success of the students in the program and their subsequent employment is a real triumph," Ms Kennedy said. "Most of the students have endured personal hardship and difficulties, but have been prepared to start again.

"These students are real battlers. They came with horror stories of civil war at home, of leaving family and friends behind to start a new life in Australia, some could not speak or understand English very well, and yet they succeeded, and have rebuilt their careers."

With the experience of last year to draw on, the program has undergone several changes. The minimum level of English skills required has been increased to ensure students can keep up with the workload. The academic programs have also been extended to 18 months, if required.

Last year's OTT group: (from left) Ms Mangalika Bandara, Ms Vita Shnaider, Ms Ida Elikhis, Ms Margaret Evans, Ms Ninel Iaroslavski, Ms Zulema Santos, Ms Anne Kennedy, Ms Irina Markevitch, Ms Ro Allen and Ms Maria Mitchell. Absent: Ms Barbara Trescowthick, Ms Minoo Sobhanian, Ms Angela McCrory.

"A feature of the program is its flexibility to tailor the course to suit individual students," Ms Kennedy said.

"The students come from a wide range of backrounds, with varying levels of communication skills and unique personal considerations."

Ms Kennedy said the students were all highly qualified in their own country and in many instances were experts in their field. "We need to be aware of their level of academic ability and not fall into the trap of assuming they don't know certain things," she said. "The students this year have all been in Australia longer, their language skills are much better, and so they are making the adjustment more easily."

Faculty staff have fostered a strong relationship with the students and have taken part in special workshops to help understand the group.

Ms Kennedy, with lecturer Ms Rosemary Allen, have been responsible for integrating the program into mainstream teaching.

Libraries: AD 2000

Computerisation, electronic networking, and an entirely new library are just a few of the tasks confronting the Monash University librarian before the year 2000.

Librarian Mr Edward Lim specialises in computer systems and technology for libraries of the future. With the entire Monash library system under his direction, he is excited about forthcoming changes.

"By next century, the Monash library will have changed beyond recognition," Mr Lim says. "What we'll have is a library extending beyond the physical boundaries of a building. Students and researchers will have access to information around the world by linking their personal computers at home or in the office to the university global information network."

Academic librarianship has its own individual challenges. "Inflation has made it impossible for any academic library to be self-sufficient or to acquire everything needed to support the teaching and research community. Coupled with the establishment of global networks and other information technology developments, this has led to a new academic library paradigm," he explained.

"We are involved independently, as well as with many other university libraries, in creating new types of networked information systems. The economics of these developments are still uncertain though."

Problems with deterioration

Overcoming physical deterioration of the paper-based collection at Monash is another task Mr Lim must consider. "Rare books printed on acid-free paper will survive, but modern books will deteriorate in the next 20 to 30 years. Transferring publications to optical disk is only a short-term solution, for they too have a limited life."

Mr Lim is responsible for the entire Monash University Library system, which consists of four branch libraries on Clayton campus, and libraries on Caulfield, Frankston and Gippsland campuses. The libraries employ almost 300 people, including technical services staff, subject librarians, and library systems specialists.

More than three million people use the libraries each year, thousands every day. Its services are used not only by Monash people but also by the local community.

University librarian Edward Lim

"Weekend usage studies indicate that 30 per cent of our users are from the general community," he said.

Originally from Malaysia, Mr Lim has been at Monash since 1988. Before coming here he worked at the University of Science as its foundation and chief librarian, and before that at the University of Malaya.

Mr Lim has undertaken consultancy work for UNESCO and the IDRC (International Development and Research Centre, Canada) on information and library systems in South-East Asia, East Asia (including China and Hong Kong), India, Pakistan, Egypt and the eastern Caribbean. One of his most interesting assignments was a UNESCO project to revive the ancient library of Alexandria.

Mr Lim has 50 publications to his credit including two books. He also sits on the editorial board of three international library journals.

Since his arrival in Australia almost five years ago, he spends his weekends exploring Melbourne. "It's almost impossible to sample all of the restaurants and theatres or to savour the delights of the beaches and the mountains."

In addition to his management role as university librarian, Mr Lim spends most of his time outside office hours devoted to research on computer systems and texts.

Melting pot moves north

Melbourne can no longer lay claim to being Australia's most cosmopolitan city. A report released by Monash University's Centre for Population and Urban Research reveals that Sydney has now passed Melbourne in terms of foreign-born residents aged 15 years and older.

The report is based on previously unpublished data from an Australian Bureau of Statistics labour force survey which provides estimates on population locations.

Figures show that Sydney has marginally pulled away from Melbourne, due mainly to Sydney capturing a much higher proportion of migrants since the mid-1980s.

The total intake of migrants also includes migrants sponsored by family members, as well as independent and business migrants selected on the basis of their skills.

The report says that as of January 1992, 35.7 per cent of Sydney's population of 15 years and older are foreign born, compared with Melbourne's 35.1 per cent.

The big jump in the percentage of immigrants settling in the harbour city is largely due to its attractions to migrants from east and South-East Asia and the Middle East, according to Centre of Population and Urban Research director Dr Bob Birrell.

Compared with 1986 figures, Sydney's foreign-born population has jumped by 4.2 per cent, while Melbourne's migrant population has increased by only 1.2 per cent.

Brisbane was the other city that recorded a significant increase in its proportion of foreign-born residents.

The report says that between January 1986 and January 1992, Brisbane's foreign-born population increased by 2 per cent.

While Perth's figure increased by 0.1 per cent, Adelaide's percentage dropped by 3.2.

Nevertheless, at 39.1 per cent, Perth has the highest percentage of foreign-born residents among all Australian capital cities.

Perth could not be considered as cosmopolitan as Sydney or Melbourne, because a large majority are from one country – the UK.

To put the size of Sydney's and Melbourne's foreign-born populations into context, New York, regarded as one of the world's most cosmopolitan cities, has a foreign-born percentage of 28.4, that is 7.3 per cent lower than Sydney.

The growth in Sydney's foreign-born percentages between 1986 and 1992 was mainly the result of the high migration intakes of the late 1980s.

The main countries of origin contributing to these increased percentages are Hong Kong, Lebanon, Malaysia, India, Vietnam, China, Taiwan and the Philippines.

A young state in old Europe

UKRAINE has been a forgotten nation in 20th century Europe. With 52 million people, its population approaches that of France, and covering an area of 233,000 square miles, it is Europe's largest country after Russia. But practically none of my new friends in Australia can spell the name of my country correctly, and only a few know that my native Kiev is not a city in Russia, but the capital of Ukraine. Unfortunately, even the Australian Government deals with this new European state via the Australian embassy in Moscow.

Although relegated to secondary status by the West, Ukraine is rapidly emerging as a forceful and important player in defining post-Soviet, European and world affairs. It was Ukraine, led by President Leonid Kravchuk, that ultimately provoked the collapse of the Soviet empire. Ukraine's refusal to sign Mikhail Gorbachev's union treaty heralded the end of the USSR and the creation of a number of new independent states in Europe and Asia. Ukrainian independence was proclaimed by a parliamentary act passed on 24 August 1991 and was approved by 90 per cent of voters at a referendum held on 1 December in the same year.

Even while submerged from view, Ukraine has always had a major influence on European affairs. In addition to its size and demography, and industrial and agricultural potential, my country occupies a strategic geographic position linking (or separating) central and southern Europe and Russia.

The independence of Ukraine was difficult for Russian and Western politicians to accept. The Baltic countries, for example, were treated as formerly independent states that had been forcibly absorbed by Stalin. But Ukraine was different. Except for brief periods between 1917 and 1920 and in the 17th century, it had not been an independent state since the Middle Ages. A principal shift in geopolitical consciousness was necessary for Western politicians to recognise Ukraine after centuries of colonial anonymity. Unfortunately, Australian politicians were not among the first to recognise my country's independence, as demonstrated when Senator Gareth Evans visited Kiev in late 1991 and urged Ukrainian leaders to preserve the dying Soviet Union.

Serhy Yekelchyk

> No aspect of Ukrainian policy has attracted greater attention than its position on nuclear weapons.

At present Ukraine is much more stable politically than Russia. It has few of the ethnic, political and cultural divisions that will likely plague Russia in years ahead. It has nothing like Russian imperial chauvinism or explosive Muslim separatism. Ukrainian politics is dominated by pro-Western movements and leaders. Nevertheless, the West has relegated Ukraine to the back burner. Russia alone has become the focal point of the West's post-Soviet policies. While Western leaders go to considerable lengths to shore up Yeltsin, Ukraine receives nothing but threats of isolation if it declines to sue for his favour, to bow and scrape as it did for centuries.

No aspect of Ukrainian policy has attracted greater attention than its position on nuclear weapons. In April 1992, Ukraine confirmed its intention to be a neutral, non-nuclear state. Today, although nuclear warheads remain under Russian command, Ukraine ensures 'non-use' through its own control over some delivery systems. But it is also true that Ukraine is reluctant simply to transfer its arsenal to semi-hostile Russia. It seems extraordinary that Russia should obtain billions of dollars, new work places and technologies from the West in exchange for the liquidation of Ukrainian missiles. The West prefers to concentrate all these nuclear weapons not in stable, democratic Ukraine but in unstable Russia, where even the vice-president is an open supporter of great Russian imperialism and where, during Yeltsin's every visit abroad, there is danger of a communist coup.

After the proclamation of independence, some Western commentators talked about Ukraine as the next country likely to plunge into a Yugoslavian-style civil war. But by forging an inclusive, non-ethnic conception of Ukrainian patriotism, and by understanding and supporting the rights of Ukraine's Russian, Jewish, Polish, Hungarian, Crimean Tatar and other minority groups, both the government and the opposition have avoided the divisive ethnic politics that have beset many other post-Soviet republics. The majority of Russians living in Ukraine voted for independence in the referendum of December 1991. Jewish and Crimean Tatar national organisations are among the strongest promoters of the ethnic policies of the Ukrainian Government.

Yet, while ethnic relations remain calm, state relations between Russia and Ukraine are tense. From time to time, high-ranking Russian leaders, including the vice-president, heads of parliamentary committees, and the Russian ambassador to the US, question the current borders with Ukraine and lay claim to 'historically Russian' territories.

Ukrainians view provocative remarks and deeds by Russian officials as part of a pattern of Russian conduct that plagued Ukraine for centuries.

Even if Ukrainian politicians find inspiration in the West, the economic interests of the country and its main prospects for trade will continue to lie principally in the East – particularly in Russia and other post-Soviet states. Grain is not in short supply in Western Europe and North America. Coal too is not a rare commodity on the world market. Now Ukraine is in an economic crisis that will take years to resolve. And the primary task is to preserve and develop old economic ties with the countries of the former Soviet Union. The Ukrainian economy is highly dependent on imports from these regions. At the same time, other post-Soviet states are dependent on Ukrainian industry and agriculture.

In the meantime, Ukrainian dreams are concentrated on the West, on building ties with the developed countries that will be important for revival, and on Ukrainian participation in international organisations. Australia – a country with a substantial and well-organised Ukrainian community of about 35,000 people – is of special importance for Ukraine in this sense.

> Ukraine would become a welcome buffer for the democracies of Europe.

As Ukraine works through these difficult domestic and foreign issues, there is much that the West can do to help. Post-Soviet, post-communist Europe, including Ukraine as one of its biggest nations, has entered a crisis with a depth comparable to that suffered by Europe after World War II. What is essential in the immediate future is a full economic and political reconstruction. Just as the United States and its allies eased Germany and Japan through the political and economic transition from totalitarianism to democracy after World War II, so too the West can help Ukraine. I was appalled to discover from the Australian media that billions of dollars promised by Western powers for economic stabilisation in the former Soviet Union are destined for Russia alone. But Ukraine accounted for about 25 per cent of the Soviet gross national product, and more than 17 per cent of the USSR's national income. And what of Byelorussia, Kazakhstan and the others? Who is to help them?

It seems to me that Western politicians fail to realise that if Russia were to fall prey to a revival of obscurantism and imperialism, Ukraine would become a welcome buffer for the democracies of Europe. Supporting a strong pro-Western Ukrainian democracy and assisting this new European state materially and technically would not only benefit Ukrainians, but also the entire democratic world – including Australia.

Mr Serhy Yekelchyk is a research fellow at the Institute of History of Ukraine, Ukrainian Academy of Sciences (Kiev). At present he is a visiting scholar in the Slavic section of the university's Department of German Studies and Slavic Studies.

DIOGENES

Of all the keepsakes swept away by the flood of technology, nothing more valuable has been lost than our ability to endure the company of none.

A recent promotion for a television news program drove the message home with the elegance of a policy speech. "In a world like this," it gurgled, "you can't afford to be alone." (Copywriters never quite seem to get the hang of social engineering, no matter how hard they rhyme.)

It never used to be difficult to cope with isolation – people would speak to themselves if they needed noise. Mind you, the conversations were often dull:

"Excuse me, how many sugars do you take?"

"Just the one, thanks."

"Oh, I thought you had two. Or is that me?"

"I believe that it's you."

"Either way, that means we take three. I think we'd better watch ourself."

The last time I heard someone talking to no one in particular was in 1973, when my brother-in-law dropped the gearbox of a Toyota Corolla on his foot.

If people weren't on speaking terms with themselves, they whistled or sang. Tunelessly perhaps, but at weekends suburbs would fill to fence level with music interrupted only by the percussive grunts of labour.

The point is that solitude was manageable. It was possible to accompany ourselves on walks without Walkmen, to muddle through without the emotional support of books with titles like 'Coping with Yourself' and 'Singularity and You'. Try grabbing some personal space now and see how things have changed.

One of the last respectable hold-outs for the solitary is the restaurant. But there are obstacles even here. As you begin your quiet dinner for one, the first thing you notice is the way the tables are always set for a minimum of two.

Some waiters will sweep the excess cutlery away. Others don't, leaving you with the unsettling feeling that at any moment you're about to be joined by a complete stranger.

In such circumstances, there's usually nothing better to do than tune in to the tables around you: cluttered little islands that are usually overrun with conversational game. Once I overheard a couple talking about their impending marriage. Norman, an oil-worker, had just returned from his base in Bangkok and was explaining to Ros his commitment to her in the face of numerous Thai temptations, of which he spoke graphically. Ros was excited about the forthcoming wedding. Her devotion was touching. "You are my life now," she whispered to Norman and I. Perhaps it was the nicest thing anyone had ever said to Norman. Certainly it was the nicest thing anyone said to me that night.

But lone diners face another problem. Unless you're a wine writer, a full bottle of red is usually out of the question. So, do you remain despondently sober or throw caution to the wind? Trouble is, usually by the time this little dilemma has been dehorned, the bottle-shop has closed, the restaurant is full, and that tempting breeze has become a blizzard.

Even the anonymity of the cinema has been breached. Waiting comfortably on my own recently for a film to begin, I was surprised to look up and find an elderly couple intent on company. Mine.

"I hope you don't mind," the smartly dressed gentleman said as he plonked down in the seat beside me. "But I wanted to prove to my wife that it was possible for Australians to sit close together at the pictures."

Apart from becoming the subject of social experiments, other hurdles threaten the solitary cinema-goer. You either face the choice of the aisle seat – and the constant adjustment of knees to accommodate the incontinent patrons – or the prospect of having two complete strangers fall asleep on your shoulders, and watching them dribble.