University adopts smoke-free policy

A total ban on smoking now applies in all university buildings and vehicles. University Council approved the new policy, effective from 30 September, after considering staff attitudes and recent court rulings on the effects of passive smoking.

A review by the Occupational Health and Safety (OHS) policy committee found overwhelming support for a total ban.

The policy — for staff, students and visitors — replaces the previous partial ban on smoking, introduced at Clayton campus in July 1990. A total ban already was in place at all campuses of Chisholm Institute before the merger.

The ban applies to public and communal areas of university residences, but not non-communal areas. A total ban will continue at the Frankston Halls of Residence.

However, the ban does not apply to the university clubs at Clayton and Caulfield campuses and the student unions at Caulfield and Frankston. This is because these areas are not occupied by Monash University.

Training and information coordinator at OHS, Ms Anne Olhaim said the aim of the policy was to provide a healthy environment for all staff and students by eliminating their exposure to passive smoke in Monash buildings.

A recent Federal Court decision held it was misleading and deceptive for the Tobacco Institute to state there was little evidence that cigarette smoke caused disease in non-smokers.

A review by the university clubs at Clayton and Caulfield campuses and the student unions at Caulfield and Frankston held it was misleading and deceptive to passive smoke in Monash buildings.

"Smokers taking such breaks should, in the interests of others, also take care not to smoke in the immediate vicinity of entrances and exits to buildings. Non-smokers should see these breaks as a compromise that they are willing to make to achieve a smoke-free environment."

For further information contact the OHS branch on extn 75 5006. Occupational health nurses may be contacted on extns 75 4048 and 75 5005.

Security stepped up

Security measures on the Clayton campus continue to be stepped up, according to the manager of Central Services, Mr Bill Cunningham.

He said the recent rape of a female student in the south-west car park of Clayton campus had underlined the need for all staff and students to exercise caution, particularly after hours.

Recent measures included:
- three extra security guards on night patrol, and two more during the day;
- an increase in the number of female security officers;
- more regular patrols by Victoria Police;
- the spending of $130,000 on improved lighting, especially to car parks;
- removal of vegetation around pathways;
- an extension of the security bus service.

Mr Cunningham suggests that at night staff and students should use only well-lit paths, walk in groups rather than alone, avoid talking to strangers, and use the security bus service. The Vice-Chancellor, Professor Mal Logan, has met with a student delegation to discuss matters related to security. Further security projects are being considered.

Central Services also provides a security escort service to car parks for students and staff working after hours. Security officers can also routinely check on those working back at night. Bookings are required for both services. Contact extn 75 2054 for further details.

Indonesian music and dance wedded

A traditional Indonesian wedding ceremony — combining music, dance, ritual and humour — is to be presented in the Robert Blackwood Hall.

The concert, Raji Sahur or King and Queen for a day, to be held at 8.15 pm on 11 October, is thought to be the first full-scale production of authentic Minangkabau culture in Victoria.

Music department students and the local Indonesian community will take part in the production, which features dancer Heni Gustina and visiting music lecturer, Doktorandus (Drs) Hajizar. During a four-month residency in the department, he and his wife Upiek, who is teaching dance, are promoting Indonesian culture, especially the Minangkabau performing arts.

He has brought with him a range of Minangkabau musical instruments, including a small bronze talempong orchestra, bells, rhythm sticks, and a range of wind and untuned percussion instruments. Drs Hajizar has been teaching talempong and other West Sumatran music.

As part of the visit, organised with the help of the Victorian Indonesian Language Teachers' Association and with a grant from the Australia-Indonesia Institute (Department of Foreign Affairs), Drs and Mrs Hajizar also have visited schools which teach Indonesian language.

Drs Hajizar, a well-known musician who has performed throughout Sumatra, in Jakarta, and in the US, appeared at last year's Melbourne International Festival. He has studied at the University of North Sumatra. Monash has close ties to that university through its Ethnomusicology department, founded in 1977 with Music department head, Professor Margaret Kartomi, as its first foreign adviser.

She was instrumental in arranging the residency after reading a thesis by Drs Hajizar, a lecturer in Minangkabau music at the Music Academy at Padang, West Sumatra. He is studying English while at Monash and is hoping to continue his music studies in Australia next year.

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Mr Tony Townsend and Mrs Jennie Cowell, of the Faculty of Education's South Pacific Centre for School and Community Development, recently led the Pacific delegation to a world community education conference.

The group of 17 educators from six Pacific nations attended the International Community Education Association's (ICA) sixth world conference in Port of Spain, Trinidad and Tobago.

The conference, Community education: Developing the global village, brought together almost 400 delegates from more than 60 nations.

Mr Townsend was elected by the Pacific regional delegates as director for the Pacific region of the ICA from 1991 to 1995, his second term of office. He is pictured above (left) with one of the keynote speakers, Tepuni Baba from the University of the South Pacific in Fiji.

The Faculty of Arts, through the National Centre for Australian Studies, last year granted $700 to the Christian Research Association to help develop a Yearbook for Australian Churches.

The inaugural volume has been highly commended in the Australian Literature Society's annual awards for original books written by Australians and published by Australasian publishing houses. The yearbook was one of the 40 entrants in the awards.

The yearbook is intended to be an annual publication, providing updated information on religious groups in Australia and topical articles analysing religious issues. The 1992 edition is in production. The Monash grant enabled the compilation of the original database.

An anthology of Koorie poetry edited by the director of the university's Koorie Research Centre, Dr Eve Fel, was launched last month by the Minister for Aboriginal Affairs, Mr Tom Roper.

Koorie poems of the heart was published, says Dr Fel, "not on the basis of a perceived excellence but on the basis that Koories today still have a message to send to others". Copies of the book are available from the Koorie Research Centre. The cost is $10.

Professor John Crisp, deputy head of the Mechanical Engineering department, has been elected to represent Australia on a new international body, the World Committee for Biomechanics. He also is chairman of the international steering committee for the Asia-Pacific Vibration Conference, at Monash from 25 to 29 November.

A collection of poetry by Hector Monos, a former professor of philosophy at Monash, was launched in the Department of English drama studio last month. "Gravity test" is the 33rd volume in the Poetry Monash series, published by the department.

The Digital Imaging Applications Centre (DIAC) was launched officially last month. About thirty guests, including the Vice-Chancellor, Professor Mal Logan, saw a presentation of DIAC's hardware and software research contract achievements.

The DIAC director, Professor Ken Spriggs, noted especially the support from Pro-Vice-Chancellor Professor Tom Kennedy and the college advisory committee for the centre.

The presentation included an outline of DIAC's industry-academic research link with the Australian Securities Commission (ASC). Guests cast a computer vote for an official DIAC logo, chosen from computer colour screen displays.
Journalism MA first in the state

Monash is to introduce the state's first postgraduate degree in communications next year. The Master of Arts in Communications, offered by the National Centre for Australian Studies (NCAS), is aimed at senior journalists, or other communications professionals working in public relations, public affairs and advertising.

Senior research assistant at the centre, Mr Peter Robinson, said the coursework degree would assist in journalists' professional development and establish teaching and research resources on the Australian media and communications theory.

"We are establishing a genuinely interdisciplinary program of teaching which draws on history, social and critical theory, cultural studies and visual arts," he said.

An innovative feature of the program is that a quota of one quarter of the places available will be reserved for candidates who do not have a bachelor's degree but do have substantial industry experience.

Working journalists and communications professionals also would be actively involved in the teaching program.

"There will be a series of monthly lectures which, although not a formal part of the course, students will be expected to attend," Mr Robinson said. "These lectures will be given by foreign correspondents, prominent writers, and former editors, both in Australia and overseas."

Depending on candidates' experience, the degree may be completed in one or two years of full-time study. The course's compulsory subjects include society, culture and the study of Australian media history and politics; and the history of communications.

Elective subjects will be taught by the NCAS, the Centre for Comparative Literature and Cultural Studies, and the departments of Linguistics, Anthropology and Sociology, and Visual Arts.

The two-year MA is open to candidates with a degree in any field, or equivalent qualification. The one-year MA is for those with a degree in any field and five years industry experience, a degree in any field and an appropriate graduate diploma, an honours degree, or equivalent qualification.

As well as the MA, the NCAS will offer a Graduate Diploma in Communications in 1992.

A second Press Fellowship, part of the Ideas for Australia program, also will be offered through the centre next year. The fellowships are awarded to allow journalists to participate in university life. This year's Press Fellow is age education writer Mr Luke Slattery.

Advanced medicine brought home to GPs

The first medical course offered in Australia by distance education is to be introduced at Monash next year. The Graduate Diploma in Family Medicine, set to begin in March, has been developed by the Department of Community Medicine and the Centre for Distance Learning at Gippsland. The course is designed mainly for general practitioners, but individual units may be taken by other health workers.

Senior lecturer Dr Leon Piterman said the course would be delivered through print, audio, video and computer, enabling students to stay in touch with the institution and teaching staff at all times.

The diploma aims to increase GPs' knowledge and skills in specific areas, as well as providing an appreciation of the discipline in which they work through critical appraisal.

"The department has led the field nationally and internationally in developing computer-assisted learning programs," he said. "This will eventually become one of the most important units in the Faculty of Medicine, as well as for other medical educational bodies and institutions. Such programs could be attractive to medical graduates in the Asia-Pacific region who may lack the resources to travel abroad for postgraduate study."

"A surprising number of city doctors have also expressed interest on the basis that they will not have to give up precious practice time to attend a postgraduate course," he said.

"We received more than 200 responses from all over Australia to just one national advertisement, from which 70 applicants already have completed preliminary enrolments," he said.

He said students would be linked to the PHOCUS (Primary Health-Oriented Computer Users System) national network, currently being developed in the department.

"This would allow students to communicate directly with each other."

"Such a linkage will not only help reduce the isolation of rural and remote doctors but also will help form a common bond between diploma students," Dr Piterman said.

It was hoped that the course would become a prototype for other courses in the Faculty of Medicine, as well as for other medical educational bodies and institutions. Such programs could be attractive to medical graduates in the Asia-Pacific region who may lack the resources to travel abroad for postgraduate study.

Course materials are being developed by Dr Piterman and Dr Roger Strawser, who have conducted Community Medicine's master's course in family medicine for the past three years.

The material is being converted to the distance education format with the assistance of Dr Michael Parer and Mr Noel Jackling at Gippsland. The department's course administrator, Ms Jeanette Bourke, is to coordinate the program.

The two-year diploma's two compulsory units cover the academic basis of general practice and research methods in general practice. In addition, elective units include learning and teaching family medicine, preventive care, musculoskeletal medicine, palliative care, electrocardiography skills, computers in medicine and rational prescribing.

The diploma may be upgraded to a master's degree through additional coursework and a minor thesis.

Gene probe test earns Young Achiever award

A PhD student in the Department of Microbiology has been named Victoria's Young Achiever of 1991. Ms Sharon La Fontaine, 24, won the award for developing a test which promises reliable, early diagnosis of footrot.

By detecting the disease in sheep, cattle and goats before they develop physical symptoms, the test has the potential for significant saving in the agriculture industry.

It will allow earlier treatment of infected animals and reduce the spread of the disease when an outbreak occurs. Other advantages include healthier animals, reduced veterinary costs and better quality wool.

Footrot costs Australian sheep farmers tens of millions of dollars in lost production every year. At present, a confirmed diagnosis can take up to three weeks.

Ms La Fontaine's system, based on gene probe technology, can be used to detect the microbe which causes footrot directly in clinical samples. This method avoids the usual delays involved in culturing the organism in the laboratory.

Gene probes use distinctive DNA sequences to distinguish an organism from all others, even closely related species. The research also led to the renaming and reassignment of the microbe - now called Dichelobacter nodosus - which causes the disease. Ms La Fontaine also won the Australian Wheat Board Rural Development Award.

Her work was featured in the Montage research supplement last month.

October 1991
Letter to the editor
from Professor Margaret Kartomi, Department of Music.

Should Melbourne's second arts centre be on campus?

Establishing an Arts Precinct on the Clayton campus could make Monash a major arts centre for audiences of the southeast suburbs. Indeed, the university could become a focus for the arts - second only to the Victorian Arts Centre (VAC) - by expanding professional and amateur artistic activity at Clayton and in the George Jenkins Theatre on the Frankston campus.

Women should stand up and be counted on the issues of equal opportunity and affirmative action, according to Professor Marcia Neave of the Faculty of Law.

"Change will only occur if we continue to pursue it," Professor Neave said at the launch last month of the Monash University Affirmative Action Program.

She said that statistics compiled by the Equal Opportunity Unit showed that Monash had a problem with under-representation of women on the academic staff. In addition, female general staff were concentrated in sex-segregated jobs and few women held senior administrative positions.

Women on the academic staff were concentrated in the lower levels of the academic hierarchy and, across the whole of Monash, were more likely than men to be in contract positions. There were few women of the rank of associate professor or above and women were more likely than men to be in part-time employment.

The merger of Monash with Chisholm Institute provided the opportunity for reassessment of progress in the Affirmative Action Program, and the development of a new plan to meet the needs of the enlarged university.

The chief objective of the program is a balanced representation of women and men on equitable terms in all courses, both undergraduate and postgraduate, in all occupational groupings and classifications, and in all decision-making bodies.

"The revised Affirmative Action Program integrates the programs existing before the merger," Equal Opportunity Manager, Dr Margaret James, said. "The objectives and strategies were decided after considering the statistics."

"We have placed a significant amount of emphasis on child-care. We are also hoping that the faculties next year will undertake special affirmative action initiatives, especially in relation to postgraduate students and academic staff. These areas are best dealt with within each faculty so we are looking forward to their cooperation."

"It is one of our concerns that there is a high proportion of women in contract employment, particularly the academic staff. This area needs to be examined more closely."

She said 82.1 per cent were on contract compared with 40.9 per cent of male academic staff.

Staff and students were invited to attend a series of information sessions to launch the 'Monash University art exhibitions, film screenings and other activities.

It has been proposed that the university cooperate in this venture with the VAC, and present a selection of its sponsored performances at Monash. With the centre's entrepreneurial assistance and partnership, the arts program as a whole could conceivably become self-sufficient within a few years.

The idea of the Arts Precinct has developed primarily out of the academic needs and new performance directions of the Department of Music and the drama sections of the Department of English, and Asian Languages and Studies. A new orchestral performance course begun this year and new courses, both undergraduate and postgraduate, in all occupational groupings and classifications, and in all decision-making bodies.

Dr Margaret James

The present program applies until Thursday from 40.9

The Communications Department offers:

Monash Christmas cards and presentation folders

Featuring the university's corporate image

Twenty full colour horizontal cards with envelopes cost $8, 40 cents each. The message is: Season's Greetings from Monash. To order, contact Ms Susan Byrne on ext 75 5059.

Full colour loose-leaf presentation folders cost 80 cents each. A special rate applies for orders of more than 1000. The A4 folder is also available for brochures, papers, pamphlets, course notes etc.

They also take thick documents such as Monash: An introduction. To order, complete the coupon at the bottom and return it to Public Affairs, or contact extn 75 2067.

The proposal would require new liencement permits where light meals and suppers could be served, and a lounge area for patrons.

Margaret Kartomi

Computer ware prices undercut

Contracts signed recently between the university's Computer Centre Shop and major suppliers mean that staff, students and departments can buy computer equipment and software at discount prices.

Major brands such as NEC. ACER, IBM and Apple Macintosh are available. In addition, more than 120 software lines are on sale at prices up to 60 per cent less than at commercial computer retailers.

The centre's manager, Mr Ron Coner, said the shop was a commercial venture, it was able to undercut commercial outlets.

"Apart from a small mark-up to cover freight and other expenses, the shop is maintained purely to provide high quality and reliable equipment to the Monash community at reasonable prices," Mr Coner said.

"The main purpose of the shop is to give departments, staff and students access to equipment, and project the profile of the Computer Centre." Purchases by departments are sales tax exempt because the university is classed as a non-profit organisation. Staff and students still must pay the tax on goods bought through the shop.

Staff and students will have to pay the tax on goods bought through the shop.

The Computer Centre Shop is open on Tuesday and Thursday from 10 am to 1 pm. Telephone extn 75 4740.
Making history in the schools

Supporting the teaching of history in secondary schools is the aim of a catalogue of new activities and publications from the Department of History.

The first in a series of audio tapes has just been released, and workshops and lectures for secondary students and teachers will begin next year.

The Australian cultural traditions tapes cover songs of migration and of work and protest, arranged and sung by Danny Spooner with historical commentary by senior lecturer Dr Marian Aveling. In the tapes, Danny talks about the songs' usefulness as historical sources.

Dr Aveling said the tapes, accompanied by brief notes and the text of the songs, could be used in classrooms or as a base for individual research. They are available from the department for $15 each.

At a meeting earlier this year with history coordinators from secondary schools in the regions around Monash, teachers urgently requested course materials for the new VCE history unit.

In March, the department will hold the first workshops on Australian history and the city in history. Department members will prepare annotated bibliographies listing recent publications relevant to specific study areas.

Dr Aveling said teachers were being encouraged to contact the department with their particular needs. "In the first instance, we are concerned with Year 12, although inquiries from other areas are welcome," she said.

For students, the department is planning a Sunday lecture day in March. The lectures will cover areas of study within Australian history, the city in history and revolutions. Other units will be included, depending on demand.

"Teachers also reported a need for class sets of documentary source books for individual student use," Dr Aveling said.

The books - directing students to specific events, groups, individuals, ideas or institutions - will be sold to schools by the department from November 1991.

A heavyweight dinosaur book

Before purchasing Dr Pat Vickers-Rich’s new book on prehistoric animals of Australia, prospective buyers should consider taking a course in weight lifting.

Vertebrate Palaeontology of Australasia, a 1437 page history of the study of ancient backboned animals of the region, tips the scales at just over three kilograms, giving new meaning to the term “heavy reading”. But the book is anything but ponderous.

Within its pages is a wealth of information on Australian palaeontology, illustrated with line drawings, maps and artists’ impressions of ancient fish, reptiles, birds and mammals.

The reaction to its publication has been remarkable, Dr Vickers-Rich said. Following a story last month in The Age, more than 400 orders were received in only two weeks. The initial print run of 750 is almost sold out.

Dr Vickers-Rich, a reader in earth sciences, is not surprised by the reaction. “There has always been an interest out there, but until now there has been a paucity of literature on the subject at a price people could afford. While Europe and the US have published many detailed books on prehistoric animals, similar books in Australia have been few and far between, and some of those quite inaccurate.”

The book, eight years in the writing, is based on a third-year course Dr Vickers-Rich has been teaching and coordinating since the mid 1970s. Each chapter is written by a specialist guest lecturer. Edited by Dr Vickers-Rich, Dr Tom Rich, Jennifer Monaghan, and Robert Baird, the cost of the book is as small as it is heavy. At only $59.50, it is a real featherweight in Australian publishing.

At the same time, Princeton University Press has brought out a second edition of the successful Kadimakara: Extinct Vertebrates of Australia, coedited by Dr Vickers-Rich. The current edition, on sale around the world, is a less expensive reference book than its heavier cousin, and is aimed at readers who are unfamiliar with the scientific terminology, yet interested in the detail of prehistoric life of the Antipodes. Kadimakara is on sale at $65, and contains more than 30 full-page colour illustrations of prehistoric life by artist Frank Knight.

Early next year, Dr Vickers-Rich will complete the trifecta with the publication of the long-awaited Wildlife of Gondwana, a companion volume to Dr Mary White’s book on plant evolution, The greening of Gondwana.

The new book, which will contain some of the most meticulous artists’ impressions of Australian prehistorical animal life to date, will cover about 500 million years of the prehistory of the supercontinent, Gondwana, which took in parts of Australasia, South America, Antarctica and Africa.

The wildlife of Gondwana will be published by Reed Books and is expected to cost $49.95.

Briefly

AN INTERNATIONAL health organisation, chaired by Professor Roger Short of the Centre for Reproductive Biology, has been awarded a major grant for AIDS prevention programs in developing countries.

Family Health International (FHI) was granted $168 million by the US Agency for International Development to expand HIV prevention and control programs in Africa, Asia, Latin America and the Caribbean. FHI’s AIDS Technical Support Project aims to reduce the rate of sexually transmitted HIV infection by providing developing countries with the expertise to mount AIDS prevention programs. The grant will expand successful small-scale projects into national operations.

Professor Short has been chairman of the board of directors of FHI, a non-profit biomedical research and technical assistance body, for eight years.

MONASH LAW GRADUATE Mr Neil Rees, a proponent of human rights and legal aid, has been appointed foundation Dean of Law at the University of Newcastle. He is expected to take up his post in December.

Active in legal aid, he helped to establish the Springvale Legal Service and the Kingsford Legal Centre, Sydney. He worked for the Aboriginal Legal Service, Melbourne, later becoming a founding member of the Aboriginal Law Research Unit at the University of NSW and a founding editor of Aboriginal law bulletin.

Mr Rees has served as member of the Attorney-General’s Task Force on Human Rights, and as a consultant to the governments of NSW and WA on equal opportunity law. He is the second Monash law graduate to be appointed a deanship. The first was Dean of Law, Professor Bob Williams.

October 1991
The intensive one-day course, presented by Mr Robert Hockley, is designed for managers and supervisors, human resource personnel, counsellors and health/welfare workers. The cost is $210. For further information, contact the Officer of Continuing Education on extn 73 2809.

Short courses on SPSS/PC+ The Department of Anthropology and Sociology is offering two-day courses on SPSS/PC+ to coincide with the introduction of the university's site licence. Courses are scheduled for 28 and 29 October; and 5 and 6 November. For further information, contact Mr Peter Miller, 562 0859 or Ms Julie Why, extn 75 2584.

CIPAG courses The Victorian Centre for Image Processing and Graphics (CIPAG) is offering the following new courses: Introduction to computer animation and visualisation. Four days: 8-11 October 1991. $975. Programming and using RasterPlus. Five evenings, 5.30-9.00 pm; Tuesdays and Thursdays from 19 November to 5 December. $790. The courses are designed to meet Training Guarantee Act requirements. For further information, contact the Secretary, extn 75 2227.

Bookings a theatre The George Jenkins Theatre is now booking for the 1992 season. To assist with the preparation of a program, applicants are asked to supply a list of preferred alternative venues for rental, in a format to ensure that their needs are met. Requests in writing should be sent to the Manager, George Jenkins Theatre, Frankston campus, by 30 October 1991.

Staff development courses Staff Development will present two courses in the coming week.

Notes

Diary

OCTOBER

3 Southeast Asian Studies Seminar Education of urban children in Bangkok, by Chirin Naksok. Room 513, Menzies Building. 11.15 am.

4 General and Comparative Literature Seminar The concept of the popular, by Professor John Frow, Queensland University. Room 809, Menzies Building. 2.15 pm.

5 Evening Concert Preston citadel band in concert, featuring principal trombone soloist Clarence White. Robert Blackwood Hall. 8 pm.

6 White. Robert Blackwood Hall. 8 pm.

7 English Seminar English studies in the nineties, by Mr William Bartholomew, Departmental Librarian, Menzies Building. 12.15 pm.

8 Australian Studies Seminar The horse in Australian cultural production, by Nan Mast. NAAT Meeting Room. 10.15-30 am.

9 School of Accounting Seminar Staff seminar: research program, by Mr Warren McGee, Associate Director, Australian Accounting Research Foundation. Accounting Meeting Area, 5th level, C Block, Caulfield campus. 11 am.

10 Anthropology and Sociology Seminar Sociological theory as methods of writing patriarchy, by Ms Dorothy Smith, Quarries Institute for Studies in Education. Departmental Library, Menzies Building. 11.15 am.

11 Monash Chemical Society Seminar Is controlled research management really necessary? by Professor F.L. (Rusty) Longmore, University of Melbourne. Environmental Forum Experiential poster by Ms Angie Gutozki, Ms Christina Sacket and Ms Jenni Dunn (GSES Women's Discussion Group). R6. 5.15 pm.

12 General and Comparative Literature Seminar The parade of form: Literature and self-reference, by Dr David Rocke, Monash University. Room 543, Menzies Building. 2.15 pm.

13 Genetics and Developmental Biology Seminar Research developments into the major histocompatibility complex, by Dr Brian Tal, Royal Melbourne Hospital. Room 662, Biotechnology Building. 4.15 pm.

14 Morning and Evening Concert King and Queen for a day--Rigo Solari, directed by Haijigai. Robert Blackwood Hall. Day performance: 10.30-11.45 am. Evening performance: 8.15 pm.

15 Music Research and Work-in-Progress Seminar Workshop: a discussion with music theorists and composition, by Dr Margaret Abery, University of Melbourne. Room 954, 9th floor, Menzies Building. 2.15 pm.

16 Linguistics Seminar Acquisition of grammatical categories: Examples from Worlpiri, by Dr Eve Bavin. La Trobe University. Room 5246, Menzies Building. 12.10 pm.

17 English Seminar The long shadow of Hanging Rock, Australian film in the 1980s, by Dr Brian McFarlane, Departmental Library, Menzies Building. 12.10 pm.

18 Librarianship, Archives and Records Seminar The history of Victorian prison libraries, by Dr Norman Turnour and A pH survey of Australian published materials, by Ms sheridan. Room 405, Menzies Building. 2.15 pm.

19 Faculty of Business Seminar Staff seminar: research program, by Dr Max Nathan, social, Nether­ sand Smith and Mr Malcolm seated at a block, Caulfield campus. 11 am.

20 Genetics and Developmental Biology Seminar The molecular basis of cell recognition in flowering plants, by Dr Marilyn Anderson, University of Melbourne. Room 602, Biotechnology Building. 4.15 pm.

21 Environmental Forum Environmental activism and the law, by Mr Brian Worby. Room 5405, Menzies Building. 2.15 pm.

22 Monash Chemical Society Seminar Planning to get it out? How to prepare you CV and present yourself at the interview, by Ms Jenn Evans (Fellowship Library and Information Systems) and Ms Judith Ellis (Archival Systems Consultants). Room 405, Menzies Building. 2.15 pm.

23 Monash Chemical Society Seminar How will the tertiary institutions cope with the chemistry CATs? by Mr B. Sanders, VCA and Sunshine Secondary College, and Mr C. Dwyer, Victoria Secondary College. Room 605, Menzies Building. 2.15 pm.

24 Genetics and Developmental Biology Seminar Genetic and physical analysis of the pseudomonas genotypes, by Dr Brian Tait, Royal Melbourne Hospital. $700. 9.30 am.

25 Linguistics Seminar Code switching in conversation, by Professor John Gumperz, UC Berkeley. Room 5407, Menzies Building. 11 am.

26 Staff seminar Seminar Planning to use the new subject, by Dr Eric Montague (Archival Consultants). Room 605, Menzies Building. 2.15 pm.

27 Monash Chemical Society Seminar How to get the best out of your publications, by Dr Alan Walsh, Faculty of Science and Technology. Room 602, Biotechnology Building. 10 am.

28 Librarianship, Archives and Records Seminar Seminar: the long shadow of Hanging Rock, Australian film in the 1980s, by Dr Brian McFarlane, Departmental Library, Menzies Building. 11.15 am.

30 Monash Chemical Society Seminar How will the tertiary institutions cope with the chemistry CATs? by Mr B. Sanders, VCA and Sunshine Secondary College, and Mr C. Dwyer, Victoria Secondary College. Room 605, Menzies Building. 2.15 pm.

31 Genetics and Developmental Biology Seminar A genetic and physical analysis of the pseudomonas genotypes, by Ms Madh M Escudra. Room 602, Biotechnology Building. 4.15 pm.

N O V E M B E R

1 Linguistics Seminar Process computer con­ structive: pattern in segmented grammar, by Dr Gerry Almond, Sussex University. Room 5426, Menzies Building. 11 am.

2 Monash Chemical Society Seminar Annual gen­ eral meeting and election. Reflections on seminar, by Professor R. Martin. 2.4 pm.

Notes

Toaster members

Monash Toastmasters is seeking new members. Toastmasters, an organisation of men and women who seek to raise their self confidence through improving their speaking ability, is open to all staff and students. The club operates on Tuesdays, beginning at 1.05 pm in Room 164, Education Building, or the third Tuesday of each month at 5.45 pm in the Seminar Room, Sports and Recreation.

For further information, contact Ms Gwen Rowe, extn 75 5098; Mr Doug Rash, extn 75 4579; or Ms Jean Szlak, extn 75 2787.

An angry workshop

The Office of Continuing Education will present a course entitled Anger: An occupational hazard for health professionals on 16 October.

Monash promotional video

A new promotional video has been produced about the chemistry CATs, by Dr Gerry Almond. Copies of the video are available for viewing by staff, students and external audiences.

The 16 minute video will be used extensively in universities briefly and public presentations, and overseas.

Loan copies are available free of charge for up to 48 hours. Contact Ms Susan Byrne in the Communications Department on extn 75 3094. Daenerys of the video also are on sale for $35. Contact Mr Byron Nicholas on extn 75 2284.

Send contributions for Notes and Diary to The Editor, Monash Public Affairs Office, first floor, Gallery Building, Clayton campus, phone extn 73 2063, fax 73 2079.

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Abdurrahman Wahid, head of one of the world's largest Islamic organisations.

Abdurrahman Wahid, an Islamic leader and Australian prejudice about Islam and Asia considered sacrosanct.

The following师范大学 in Indonesia - the world's largest Islamic nation. With about 20 million members, NU is that country's single most important group, outside the government's ruling party and the army.

His Australian visit last month was organised by the Centre of Southeast Asian Studies, where he is a visiting fellow. A major seminar "Trends in Indonesian Islam" was the centerpiece in a program of academic seminars, public lectures and media interviews.

During his visit, he surprised commentary with a turn to liberal ideas, not usually associated with Islamic leadership.

At the two-day seminar, overseas and Australian academics explored Abdurrahman's influence on Islam. Since taking over the leadership of NU in 1984, he has overseen the official withdrawal of the organisation from party politics and opened up vigorous debate on many Islamic issues previously considered sacrosanct.

The seminar was a re-statement of scholarship in the light of 20th century experience. For example, following principles rather than adhering to strict traditional codes of conduct.

Abdurrahman Wahid's endorsement of a separation between mosque and state exists alongside his appreciation of the core values of Islam. He is a new type of Islamic teacher; one who is equally at home with Western learning and liberal Islamic doctrine.

He studied at the Al-Azhar Islamic University in Cairo, Egypt, and went on to further studies in Arabic literature at the University of Bagdad, Iraq. He returned to Indonesia in 1970 and began a career as an Ulama, or Islamic teacher.

His influence is felt in the religious, political and intellectual spheres of Indonesian life. He has a reputation as a liberal thinker of strong convictions, with extraordinary boldness in his public views.

In Indonesia, he is controversial but well liked, particularly among the younger generation. Abdurrahman is seen as a capable leader who has maintained the support of his people, the trust and respect of government officials and the independence of his own vision and that of NU.

At the seminar, Monash scholars Dr Herb Feith and Professor Merele Rickards, as well as Dr Harold Crouch and Professor Jim Fox of the Australian National University, outlined how Indonesian Islamic thought has become more sophisticated and open.

Overseas speakers included Dr Martin van Bruijssen from the Netherlands and Professor Mitsuo Nakamura from Japan.

Rather than simply accepting the trend for a separation between religion and politics as a necessity, the majority of Indonesian Muslims now see it as a liberating development - largely due to Abdurrahman's influence. The secular nature of the modern Indonesian state is widely recognised as a positive development.

Greg Barton is PhD candidate in the Centre for Southeast Asian Studies.

Islamic leader challenges our prejudice

by Greg Barton

Australian prejudice about Islam and its role in Indonesian society were challenged during the visit to Monash of Abdurrahman Wahid, an Islamic leader of world stature.

Abdurrahman is head of Nahdlatul Ulama (NU), the largest Islamic organisation in Indonesia - the world's largest Islamic nation. With about 20 million members, NU is that country's single most important group, outside the government's ruling party and the army.

His Australian visit last month was organised by the Centre of Southeast Asian Studies, where he is a visiting fellow. A major seminar Contemporary trends in Indonesian Islam was the centerpiece in a program of academic seminars, public lectures and media interviews.

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Hospitals departments move

The relocation of wards and medical units from Prince Henry's to the Monash Medical Centre (MMC) and other hospitals was completed last month.

Following the closure of the hospital, about 1000 of its general and medical staff have moved to Clayton. Monash's clinical and research departments at Prince Henry's will also move to the centre later this year, along with the affiliated Prince Henry's Institute of Medical Research.

The Surgery, Medicine and Psychological Medicine departments are expected to move late next month, following commissioning of the new E Block at MMC and winding up of teaching commitments at Prince Henry's. Resource manager for medicine and surgery at Prince Henry's, Mr Bruce Ross, said the relocation involved a total of 150 staff.

Medicine, surgery and the Prince Henry's Institute would be housed in E Block, psychological medicine in E Block, and some offices and wards in D Block.

He said the new buildings at MMC offered staff a substantial improvement in laboratory and office facilities, as well as a reducing travelling time to the Clayton campus.

Fourth, fifth and sixth year medical students are taught by the Faculty of Medicine at its hospital-based departments.

Research skills developing

Monash's professional development program is up and running successfully with 20 staff members, representing all four campuses, taking part.

The $225,000 pilot program - financed by the Federal Government and organised by the Higher Education and Research Unit (HERU) - aims to enhance Monash's teaching and research reputation.

Program participants will cover many aspects of research, teaching, administration, and the university's links with the community during the five-month course. Subjects include curriculum design and evaluation, staff appraisal, research design, analysis and administration and graduate student supervision.

Mr Dilib Nag, of the School of Civil Engineering at Monash University College Gippsland, said the program was particularly useful for participants from campuses which previously had undertaken only limited research work.

"Some of us come from campuses which weren't as research oriented as the main Clayton campus, so the program gives us some pointers on how to start research work, write papers and so forth," Mr Nag said. In addition, he said the program provided a valuable forum for meeting colleagues from other campuses and exchanging ideas.
As strong as the concrete, however, are the historical institutions to change: they are literally set in concrete. Then, as now, Melbourne was undergoing one of its periodical fits of remorseful self-examination. A port of the 1880s, the self-styled Melbourne Journals reflected on the tendency of Melburnians to wallow from moods of extravagant optimism to periods of extravagant despair. One is a city ever in extremes.

One is a city ever in extremes. Is it a nightmare or in golden dreams? People wondered whether there was something basically wrong, unnatural even, in the development of the city. "Is Melbourne over-built?" one commentator asked in 1891. Was the sprawl of suburbs for which the city, even then, was becoming notorious, a blessing or a curse? Could it be really afford to be so much in bricks and mortar, roads and railways? Was it the "right" for individual home ownership, that had made so many young Melburnians into debt and repose, a sin-caller to disaster? Now as the golden dreams of the 1980s gave way to the nightmares of the 1990s, Melbourne is once again a city in extremes. Only yesterday, it seems, we were congratulating ourselves on being 'the world's most livable city'. (A fading billboard on the exit road from Tullamarine Airport still advises arriving passengers of the fact.) But many of the virtues that contributed to the city's reputation for 'livability' - low residential densities and good urban services, for example - suddenly have become vices in the eyes of some experts.

The recent spate of newspaper articles about 'Melbourne 2000', the Victorian government's discussion paper on 'Urban Development Options for Victoria' and Mr Brian Howe's 'Program for Better Cities have lately been singing the season's praises. From the very beginnings of white settlement the suburb was the Australian urban ideal. When Arthur Phillip founded Sydney in 1788 he laid it out on an urban grid. "The land," he declared, "will be granted with a clause that will prevent more than one house being built on the allotment, which will be sixty feet in front and one hundred and fifty in depth" - roughly the dimensions of a standard suburban block! Within four years of its foundation in 1834, when Melbourne was still little more than John Batman's "village", real estate men were already urging its "Capitalists, Merchants, Farmers, Traders and Womankind" to consider the advantages of living on a "suburban allotment".

The suburbanised form of the Australian city was reinforced by the aspirations of successive generations of immigrants. For English town dwellers in the 1850s, as much as Greek peasants in the 1960s, the suburban house and garden was a symbol of individual freedom and economic self-sufficiency. From the outset, cities like Melbourne were able to utilise the latest forms of urban technology - railways, cable cars, telephones. They built suburbs around them rather than demolishing the city to make way for them, as many Old World cities were forced to do.

Today, as we see a new attack on the city, North Melbourne. "The suburbs," the poet of the Age editorial sagely observed, "are the ills of the city passed on...In a sense, the suburbs are the city's way of life. Urban roads, railways, schools and police stations, not - as in the United States - city dwellings of hundreds of thousands, which would have curbed the pace of development, but out of central government revenues. In the twentieth century, and especially since World War II, Federal governments have increased the subsidies with road programs, cheap housing finance, tax relief and "home-savings grants" for home owners. From the 1960s the mortgage belt of the capital cities became the place where Australian governments were made and unmade, and political parties competed for its allegiance largely on the basis of what each would do to foster the suburban way of life.

By the early 1990s this suburban way of life faces new challenges. The suburbia, not by the current recession alone, but more formidably by the rapid dismantling of the economic, political and technological structures which have so long supported it. As the world economy is uncoupled from the old resource base, cities like Melbourne - with its traditional deep dependence on wool, wheat and other protected manufacturers - may become marginalized in an economic backwater.

High interest rates and the rising costs of urban services may make it harder for the next generation of Melbourne households to afford the traditional suburban way of life. Rising energy costs and increasing levels of traffic congestion and atmospheric pollution will make the long commute to the suburbs slower, more expensive and more onerous. And, as rationalising governments whittle away the subsidies that supported the suburban way of life, their life-support systems may crumble and decay.

Happily, not all the forces of contemporary society work against the suburbs. Some of the features of post-industrialism - high reliance on electronic communication and shorter working hours, for example - may actually favor more dispersed, rather than concentrated, patterns of urban life. If the tide has turned against the suburban way of life in our own society, it is not just because we can no longer afford it, but because we have begun to question the values that once supported it.

Declining levels and changing sources of immigration, smaller families and smaller household size have created a new urban agenda to which contemporary suburbs now seem more virtuous and attractive than dispersal. How achievable such an agenda may be remains to be seen, for as yet we have barely begun to think of ourselves outside the suburban mind-set that has so long sufficed our understanding of ourselves.

Graeme Davison is Professor of History.
Aspirin and related compounds like paracetamol and indomethacin are the world's most widely used anti-pain and anti-inflammatory drugs. Recently, aspirin has also been shown to help prevent heart attack and stroke by acting as an anti-clotting agent. It is also among the safest of drugs, having few adverse side effects when taken in small quantities. Some wonder that aspirin has the reputation of a wonder drug. But Professor Geoff Thorburn, head of the Department of Physiology, now has sounded a warning to women: high doses of aspirin should be avoided during pregnancy.

The anti-inflammatory properties of aspirin and aspirin-like drugs derive from the fact that they suppress the activity of hormone-like chemicals called prostaglandins. In a study funded by the National Health and Medical Research Council, Professor Thorburn and the members of his research team - Drs Stuart Hooper, Richard Harding, David Walker, Ross Young and Greg Rice - have shown that one particular prostaglandin secreted by the placenta, PGE2, plays a central role in maintaining the specialised metabolism of the developing fetus.

Their new evidence points to the possibility that indomethacin, a more potent form of aspirin, may subtly interfere with fetal development by suppressing placental production of PGE2. The evidence was presented when the fetus is already under stress because of an inadequate placenta or because the mother smokes or takes drugs.

The research team believes that, while not yet definitive, their evidence at least warrants the addition of aspirin to the list of drugs that should be used with caution in pregnancy. The Monash group recently has begun to publicise a new view that the placenta, rather than being a passive interface between mother and baby, actively maintains pregnancy by dictating the physiological state of the fetus.

The Monash group does most of its research on sheep - a species that Australian scientists have studied intensively for more than half a century. The species is a convenient model for studying pregnancy and fetal development; it is readily available, and pregnant sheep are less likely to abort their fetuses if the fetus is briefly removed from the womb. This is done to implant catheters into blood vessels during pregnancy, allowing study of the fetus in its natural environment in an unstressed, conscious adult. When the fetus starts breathing as it is born, the baby's lungs begin to breathe continuously, turns on new enzyme pathways in the liver, and begins to burn brown fat to keep itself warm.

Shivering thermogenesis, to generate heat from muscle activity. The body's primary fuel source, to be sequestered in the liver as glycogen, for use as a readily available energy source after birth. (By lowering blood glucose, CAMP maintains the low metabolic rate of the fetus.)

One group's research has shown that the placenta is so effective at keeping the fetus in this quiescent state that even if a tube is introduced to traheas of unborn lamb, and oxygen is made available to the lungs, it will not breathe while it remains connected to the placenta. But if the umbilical cord is clamped, the fetus starts breathing as if it had already entered the outside world. When the clamp is removed, the fetus stops breathing again.

Professor Thorburn says PG E2 may play a central role in initiating birth, by promoting the maturation of a number of organ systems that the fetus will depend on when it is born, but at the same time it suppresses their function before birth.

The most important organ for survival outside the womb is the lung. Recent overseas work on human lungs has shown that during the last six to eight weeks of pregnancy, the fetal lungs begin to produce a surfactant.
Patient X: a case study

Patient X, a 60 year old male, was admitted to hospital with weakness of the left side - a tell-tale signature of a mild stroke. A brain scan confirmed that he had suffered a disruption to blood flow in the vicinity of the right parietal lobe, towards the rear of the brain.

In hand-eye tests to assess his condition, Patient X showed a curious deficit in perception. When asked to bisect a series of horizontal lines drawn on a sheet of paper, he would make a mark towards the right-hand end of the line, rather than in the middle, as if he was unaware that the line extended out to the left.

Similarly, when asked to count out stars randomly distributed over a page, Patient X only succeeded with stars on the right side, even though he was instructed to scan the whole page. It was as if the left side of the page did not exist for him.

The problem was not confined to perceptual tests. At mealtimes Patient X ignored food on the left side of the plate, only eating when the plate was rotated 180 degrees. He shied only the right side of his face, leaving the left side unwashed and covered with bristles.

When the left or right side of the human brain is damaged its links between perception and action can be disengaged, with remarkable results. Dr John Bradshaw's study of left neglect is revealing more about how the brain is organised.

The two sides of the human brain tend to control different functions, so when damage occurs the results differ as well. In most people, speech and language is more affected after left side damage, while certain spatial capacities are more disrupted with right hemisphere injury.

Dr John Bradshaw, neuropsychologist and Reader in the Department of Psychology, and postgraduate students Ms Jane Pierson and Mr Jason Mattingley, have been studying a condition known as unilateral neglect.

It occurs after brain damage from accidents, stroke, tumours or cerebral haemorrhage. "Patients with right hemisphere lesions suffer from left neglect; they typically fail to attend to or orient towards events in that side of space," Dr Bradshaw said.

"Left neglect is more common and more severe than right neglect, and the disability is more persistent. We are following patients through and mapping their progress over time."

The group is interested in subtle residual deficits after the patients have returned home, particularly in their ability to respond to stimuli in their normal environment. This is where the 3D computer programs they developed become useful.

Mr Mattingley says patients with posterior or parietal damage to the right hemisphere usually show deficits in perception; they fail to perceive things in the left side of space. If damage is to the anterior or frontal region, it manifests itself more in deficits in directionality of movement and orientation.

The patient may avoid turning or looking towards the left, and may have difficulty in moving the right hand towards the left, even though the hand and arm are not physically impaired.

"Somehow the link between perception and action is disrupted, a connection so seamless that it is usually impossible to say where one ends and the other begins," Dr Bradshaw says.

Dr Bradshaw and his group have developed computer-based testing systems which analyse the various parameters of movement. For example, the difference in time that a patient takes to initiate and to execute a variety of simple or complex movements.

"Patients with neglect have difficulties shifting or directing attention in a particular direction, which manifests themselves in the control of movement," Dr Bradshaw said.

"This includes how movements speed up at the beginning or slow down at the end of a trajectory.

"Each side of the brain is responsible for attending to the opposite side of space, so that the left side attends to the right and vice versa. But on top of that there is an overall dominance of the right side of the brain for the perception of and control of movement in space.

"This matches the usual dominance of the logical left side of the brain for most language functions."

"Consequently, the right hemisphere controls spatial attention not just on the opposite left side, but to some extent on its own right side as well. This means that when the right side is damaged, the effects of unilateral neglect are much stronger than when the left hemisphere is damaged. Then, however, there is typically gross disruption to speech, which rarely occurs with right side damage.

The group also uses a face-matching task to assess the purely perceptual aspects of neglect. We normally recognise people or their expressions by concentrating on features on the left side (as viewed of the face)."

The photographs above illustrate the bias. Most people will judge the bottom two composite faces with the smile on the left as the happier, even though a pair (top and bottom) of such composites are exact mirror images of each other.

Dr Bradshaw says even normal people are somewhat lopsided in facial movements. When they begin talking, the right side of the mouth is likely to open slightly earlier, and to make larger speech movements.

"A good example is the happy-sad face composite: most people will usually judge the composites with the smile on the left as the happier faces."

"If the left side of the face is damaged its links between perception and action can be disengaged, a connection so seamless that it is usually impossible to say where one ends and the other begins," Dr Bradshaw says.

"This asymmetry is replaced by changes in movement parameters in or towards the left side of space when the damage is more anterior."

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In another example of unilateral neglect, Professor Viguéroux of the Clinique de Neurologie in Paris analysed the paintings of a well-known modern French artist who suffered a right-posterior stroke. In work completed after his stroke, the artist did one of two things. He either failed to complete the left side of the painting, or he completed the painting but omitted the left side of objects in it: he drew half-house, or half-houses.

Dr Bradshaw says that drawing half a house, half a face, had a clock (see figure 1) or half a sunflower is in fact a symptom of the syndrome. He says that when these patients are asked why they ignore things to the left, they give responses like: “I didn’t think it mattered,” or “I didn’t notice it,” or “It’s not very important.”

The information does, in fact, enter the brain but does not penetrate the upper levels of awareness. In a dramatic demonstration described in the prestigious science journal Nature, Dr John Marshall, a neuropsychologist at Oxford University, drew pictures of several houses, some of which had flames emerging from the left side. He asked one of his patients suffering from left neglect to describe the houses. At no time did she mention that some of the houses were on fire. She was then asked which houses she would prefer to live in; she invariably chose the houses without the flames. “At an unconscious level she acknowledged the fact that something was wrong with the houses,” Dr Bradshaw said, “but could not say what it was.”

The question of unconscious awareness is becoming interesting in a much broader area of psychology. There is a syndrome known as prosopagnosia: the inability to recognise faces, even your own when you are looking in a mirror.

“S I invariably involves right posterior damage, though there may also be some left posterior damage too,” Dr Bradshaw said. “These patients are quite unable to recognise their wife, husband or doctor by facial appearance. But they can recognise them by voice, or by visual cues such as the presence of a mole, spectacles or a beard. The right hemisphere of the vertebrate brain seems to play a major role during preocceptive behaviour – as evidenced by lesion experiments with rats and chicks – and this bias in brain function may be reflected in leftwards turning tendencies in the male impala.

Further studies with rats show that the right hemisphere seems to dominate in the mediation of emotional and spatial behaviour, just as it does in humans. Moreover, in a free field choice situation, rats tend to turn right, as do humans, in the absence of emotional or other pressures.

In mice, the left hemisphere of the brain seems to respond preferentially to alarm or other calls emitted by their pups; in humans, the left hemisphere is largely responsible for speech and language. Dr Bradshaw says that the same functional asymmetry is evident in song control in songbirds.

Parrots usually hold food with their left foot, equivalent to our left hand, and manipulate it with the beak, corresponding to our right hand.

While monkeys and lower primates may appear to use either hand to obtain food, under conditions of awkward posture they tend to reach with the left hand. This may reflect right-hemisphere spatial control, or use by the right hand to steady the body while reaching awkwardly.

Dr John Bradshaw (left) and research student Mr Jason Mattingley.

Dr Bradshaw has published widely on the phenomenon of lateral asymmetry. He is writing a book with Associate Professor Lesley Rogers, formerly of Monash and now at the University of New England, on the evolution of language and tool use in humans. These lateral characteristics colour our species.

The oldest known behavioural asymmetry dates to the Cambrian period, 500 million years ago. Fossil trilobites, an extinct group of marine arthropods which superficially resemble king crabs, often show damage that suggests they survived attacks from predators.

The scars generally occur on the right side of the body, suggesting that trilobites adopted a defensive posture or were subjected to a unidirectional attack – that exposed the right side (see figure 2).

Dr Bradshaw says a similar explanation may account for observations that in recent times natal impalas tend to have many more scars on the right than on the left side of the body after encounters with rivals in the mating season, suggesting that they turn left rather than right during such competitive engagements (see figure 3).

The right hemisphere of the vertebrate brain seems to play a major role during preocceptive behaviour – as evidenced by lesion experiments with rats and chicks – and this bias in brain function may be reflected in leftwards turning tendencies in the male impala.

Figure 2.

Taking sides in prehistory

Dr Bradshaw says that from research into many species of Old World monkeys, and in the African apes, the right hand seems to be used for complex, speeded, manipulative tasks involving spontaneous practical activities, or where fine control over grasping pressure is required.

In macaque monkeys, seven out of ten forelimb dimensions are larger on the right, with the disparity greatest in the large bones of the forearm, the ulna and the humerus. Humans show a similar pattern. Dr Bradshaw says it is not simply due to hypertrophy with age – the tendency of the favoured limb to develop larger dimensions through use.

DNA evidence indicates that the African and Asian aces diverged about 12 million years ago. The gorilla branched off around 8 million years ago, while chimpanzees and humans diverged as recently as perhaps 6 million years ago.

By around 2.5 million years ago our presumed ancestor – through still very small in brain – was making crude stone tools to cut plant materials and perhaps meat. Dr Bradshaw says examination of the cutting surfaces of these tools indicates that the makers were predominantly right handed.

However, many of our other lateral functions would seem to have a far more ancient ancestry, with communicative and manipulative functions largely provided by the right hemisphere of the brain, and spatial and emotional aspects more of the right.
Aspirin use questioned

From Research Monash

This detergent-like liquid lowers the surface tension at the air-water interface, permitting the lungs to inflate when the fetus takes its first breath. The surfactant also prevents the lungs from deflating after the baby is born. It is now known that PGE2 works in concert with cortisol to mature the fetal lung through its intermediary, PGE2 secretory pathways.

Aspirin and indomethacin bind to cyclooxygenase. It was this link that caused Professor Thorburn to become concerned about the use of aspirin in pregnancy because aspirin decreases cyclooxygenase activity.

"This is the point of giving aspirin or indomethacin: It lowers fever in the infant," Professor Thorburn said. "The more potent drugs like indomethacin also cause uterine contractions. It is important to make sure that this does not happen to the placenta and the fetus!"

Professor Thorburn's research team has found that blood flow to the fetus is reduced during aspirin use. The fetus becomes hypoxic; they show symptoms of oxygen deprivation. If the fetus is hypoxic, there is an increase in serum levels of two hormones associated with stress, adrenalin and noradrenalin - generally called catecholamines.

Catecholamines mediate the activity of the sympathetic (autonomic) nervous system, which in adults is responsible for the "fight-or-flight" reaction when danger is encountered. In the fetus, however, this response is inappropriate, so the fetus counters it by secreting more PGE2.

The research group has found that in all tissues and organs studied, PGE2 opposes the activity of the catecholamines, reducing stress. Professor Thorburn accepts this concept of the opposing roles of PGE2 and catecholamines is new, and is important for understanding the role of the placenta in fetal maturity.

Under the rigorous naturally imposed conditions of pregnancy, the fetus is already stressed by placental insufficiency or maternal obesity, but the principle remains the same. Some enzyme abnormality leading to increased PGE2 production - may cause prematurity labour, is not known.

Whatever the cause, prematurity labour results in the fetus being born in an immature state. Only a quarter of a century ago most babies born 10 weeks early would die. Today, medical science is able to save babies born 15 weeks early. "We wonder whether there will be increasing numbers of premature births in the future," Professor Thorburn said.

Another unknown discovered role for PGE2 is a recent insight - of PGE2 on the stress pathway between the pituitary gland in the brain and the adrenal glands - source of the stress hormones that affect the fetus. In a pioneering study, New Zealand obstetrician Professor Sir Graham Liggins showed that activation of the pituitary-adrenal stress pathway triggers birth.

"It has been possible to show that the fetus actually initiates its own birth," Professor Thorburn says. "It has proved difficult to transfer that concept to the human fetus." Professor Thorburn says that the liver, not the Sertoli cells, secretes the liver hormones that mature the fetal liver. But the same experiment does not work in primates.

"It is becoming common practice to treat women coming into premature labour with indomethacin or similar compounds to block prostaglandin synthesis and thereby inhibit uterine contractions. We would ask: What effect does this have on the placenta and the fetus?"

Aspirin use questioned

Members of the fetal and neonatal research group in the Physiology Department (from left) Drs Stuart Hooper, Davita Walker and Greg Rice. Behind text below: the structural formula for the PGE2 prostaglandin.