



● This is not a case of bowler to batsman. Although Dean of Science, Prof. John Swan, looks very cavalier in his doctoral bonnet, his attitude to the recent Prof. Board game was far from that. At quite another game, 'the destroyer' C Grade bowler Lynne O'Brien took 12 wickets for the match against Brighton Union.



Women take top honors at cricket

Monash women's cricket club finished the 1981-82 season in spectacular fashion, with both teams taking out the premiership — and producing a string of personal and team "best" performances.

In A grade, Monash — captained by Amanda Griffin — established a club record with 312 in the semi-finals . . . then went on to shatter it with a massive 8/432 in the grand final against Doncaster.

And in C grade, Joanne Wilson led Monash to an easy outright win in the grand final against Brighton Union.

The results have been a triumph for Monash's new coach, former South Australian State captain, Lola Cameron.


Miss Cameron, who represented SA for 15 years in the post-war period and led the team on a successful tour of New Zealand in 1958-59, took over the Monash teams at the beginning of the season.

(Her success has led the women's club to offer her services to the Monash men's club, which this year did not enjoy the same degree of success as the women).

Miss Cameron has high praise for the support and encouragement the women cricketers have received from the Monash Sports and Recreation Association.

"The help they've given us — and the superb training facilities they've provided — were a major factor in our success," she said.

● Continued back page.



MONASH REPORTER

A MAGAZINE FOR THE UNIVERSITY

Registered by Australia Post — publication No. VBG0435

NUMBER 2-82 **APRIL 6, 1982**

IVF: The Issues

Special report

The first success of the process of in vitro fertilisation and embryo transfer in humans was recorded in July, 1978 with the birth of the world's first test-tube baby.

Australia's first test-tube baby was born in June, 1980 and since then Melbourne has established itself as the world leader in IVF successes. Many of these have resulted from the work of a team in the Monash department of Obstetrics and Gynaecology, headed by Professor Carl Wood, based at the Queen Victoria Medical Centre.

While these programs have brought hope to infertile couples and, if opinion polls are to be believed, enjoy widespread public support, an increasing number of questions has been raised on the ethical and legal implications of IVF and ET. It has been generally acknowledged that there is the need for community debate on these issues.

To this end on March 11, Monash's Centre for Human Bioethics organised Australia's first national conference on "IVF: Problems and Possibilities" which attracted a large audience representing diverse opinions.

On the same day, the Victorian Government announced that it was

establishing an inquiry into the social and ethical implications of test-tube baby programs. This is to be conducted by a multi-disciplinary committee chaired by Victoria's new Law Reform Commissioner, Professor Louis Waller (currently on leave from Monash's Law faculty).

Also, last month Oxford University Press published a major contribution to debate in the book "Test-Tube Babies: A guide to moral questions, present techniques and future possibilities", edited by Peter Singer, professor of Philosophy at Monash, and William Walters, associate professor in Obstetrics and Gynaecology.

In the UK, the Anglican and non-conformist churches last month gave conditional approval to IVF programs but added their voice to the demands for a public inquiry in that country into the ethical issues.

Monash Reporter examines this topical matter in a special two-part report "IVF: The Issues" beginning this month. The report is compiled from papers delivered to the Centre for Human Bioethics conference. Turn to pages 6, 7.

The changing sources of university research funding

The past five years of "steady state" funding for universities have seen significant changes in the sources of research money received by Monash.

Figures prepared recently by the Finance Development Officer, Mr John Browne, show that grants and donations (as distinct from the general recurrent funds provided directly by the Commonwealth Government for the day-to-day operation of the University) have increased substantially since 1977.

Traditionally, the University has relied heavily upon the recognised government agencies responsible for the distribution of research funds: the Australian Research Grants Committee (ARGC), the National Health & Medical Research Council (NH & MRC), and the Education Research & Development Committee (ERDC).

In recent years, however, it has become apparent that other sources of finance would have to be tapped. Consequently, the University has redoubled its efforts to attract funds from private and 'indirect government' sources.

The accompanying table and graphs show the results.

Table A shows that in 1977 by far the greater proportion of research funding came from government sources: ARGC (35%), NH & MRC (20%) and ERDC (2%) — 57% of the total 'grants and donations' income.

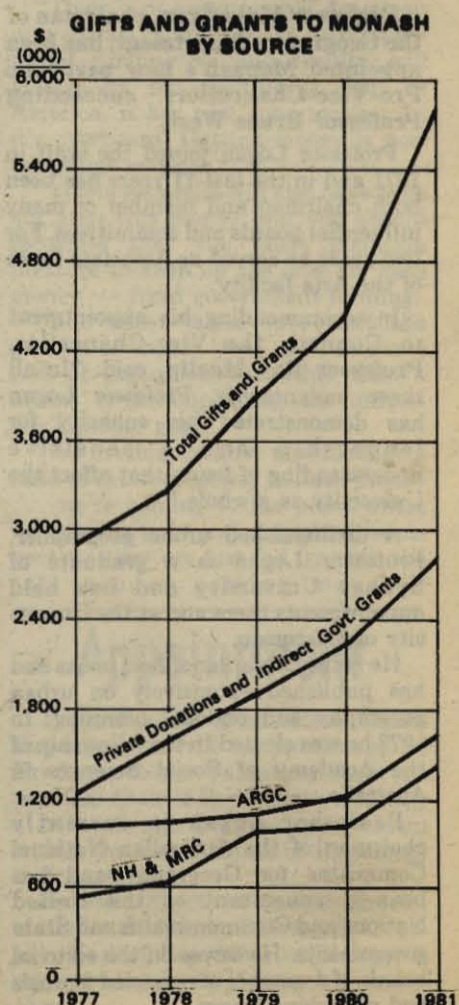
Money from 'private donations and indirect government research grants' accounted for just 43% of the total.

SOURCES OF GRANTS AND DONATIONS	1977	1978	1979	1980	1981	% Increase from 1977-1981
	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	
Private donations and indirect Government Research Grants	1,244	1,586	1,887	2,175	2,780	123.5
Australian Research Grants Committee	1,026	1,035	1,045	204	1,581	54.1
National Health & Medical Association Council	571	636	914	952	1,387	142.9
Education Research & Development Committee	51	25	31	35	18	-70.5
Total	2,902	3,282	3,877	4,366	5,766	98.7

(The latter category includes grants from individual Federal and State government departments and instrumentalities for specific research projects, as well as grants from firms and industry-supported organisations, philanthropic institutions, trusts, foundations, service clubs and private benefactors.)

By 1981, the picture had changed noticeably: Support from the "traditional" sources had declined to about 52% of total research funds, while contributions from other sources had climbed to 48%.

● Continued P. 3.



Tasks at the top

The Vice-Chancellor, Professor Ray Martin, has a new team this year in Deputy V-C, Professor Kevin Westfold, and Pro V-C, Professor Mal Logan.

The "smooth running of the University" is the name of their game but just how are the diverse responsibilities for achieving this divided among the three?

Professor Martin recently reported to Council on these arrangements for his office in 1982:

The VICE-CHANCELLOR will deal with:

- Council.
- Professorial Board.
- Committee of Deans.
- Finance Committee and major budgetary matters.
- Development and Planning Committees.
- Chair and decanal selection committees.
- Honorary Degrees Committee.
- Emeritus Professorships and Professorial Loadings Committees.
- AVCC and VVCC.
- Communications with the CTEC, UC, VPSEC and the State and Federal Governments.

The DEPUTY-VICE CHANCELLOR will deal with:

Staff and employment matters in general, including approval of new, replacement and acting appoint-

ments, industrial matters, liaison with FAUSA and the two Monash staff associations, promotions and the Outside Studies Program.

Research matters in general, including responsibility for ARGC, NH & MRC, NERDDC and other research grants.

Allocation of the CTEC Special Research Grant and the CTEC Equipment Grant.

Budgetary matters emerging from the Committee of Deans.

Student entrance including education matters arising from VISE and IUSCUE (Chairman).

He will represent the Vice-Chancellor on the following committees and handle associated business: Staff Committee, Superannuation Administrators and Trustees, Monash Review Committee (Chairman), and Religious Centre Advisory Committee.

He will also act as deputy chairman of the Committee of Deans and the Development Committee.

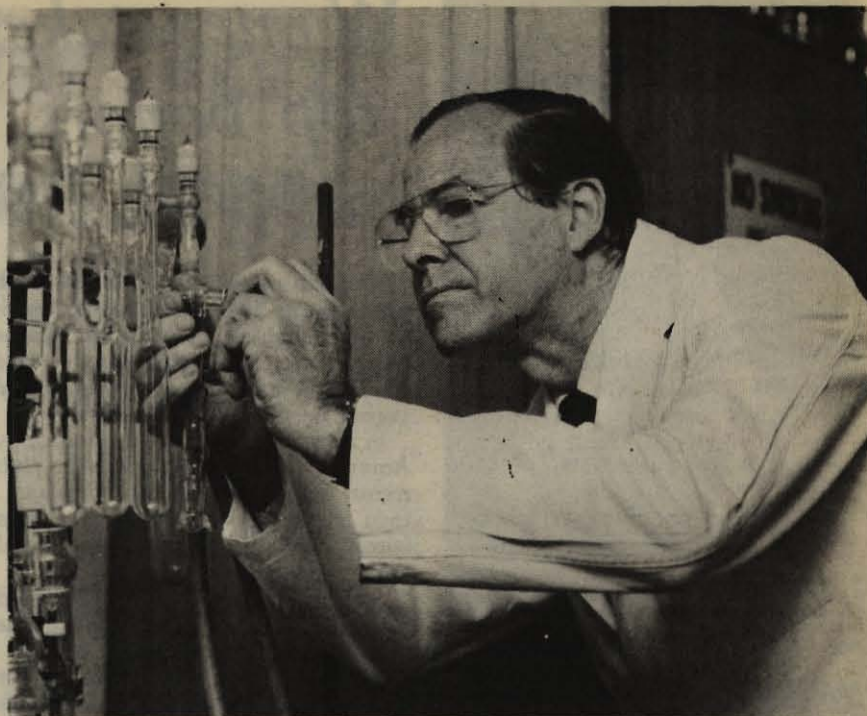
The PRO-VICE-CHANCELLOR will deal with:

Higher degree matters in general including chairmanship of the Ph.D. and Research Committee.

Graduate scholarships and other aspects of graduate student support.

Relations with MAS, MAGS and student matters in general.

He will represent the Vice-Chancellor on the following committees and handle associated business: Buildings Committee, Affiliation Committee; Biosafety Committee, Halls of Residence Committee, Housing Committee, Parking Committee, Patents Committee, General Library Committee; Krongold Centre Committee (chairman), the Standing Committee on the Higher Education Advisory and Research Unit (chairman), and the Committee on Ethics and Animal Experimentation.



... And for Prof. West it's now Chemistry full-time

For the last six years Professor Bruce West has "commuted" in his work between the Chemistry department and the University Offices.

Professor West spent .5 of his time as Monash's Pro-Vice-Chancellor and .5 on his work in inorganic chemistry. While, on paper, .5 and .5 add up to 1, 'over' full-time might be a more appropriate description of the demands made by combining two such tasks.

Late last year Professor West resigned as Pro-Vice-Chancellor to return to full-time teaching and research in Chemistry (he stayed on in his administrative post until the start of March, however, when Professor Kevin Westfold returned from overseas to take up his new position as Deputy Vice-Chancellor).

The research project Professor West continues with is a study of the influence of sulphur and nitrogen atoms on the behaviour of various metal compounds, particularly that of chromium and iron, a number of which are model systems for certain biologically-important metal-protein systems.

Working with him are four Ph.D. students and research assistants. As well, he is participating in the supervision of three honours students.

Research responsibility

As Pro-Vice-Chancellor, Professor West's main responsibility was matters affecting research, particularly the operation of Monash's Ph.D. and Research Committee. In fact, from 1966 until this year he had virtually an unbroken association — either as chairman or member — with this Committee.

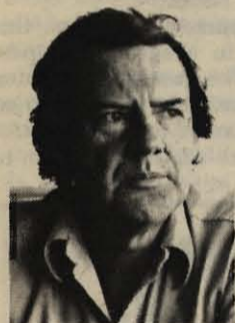
He was also responsible for setting up a system for allocating Special Research Grants in the University. The Special Research Grants program is now in its fourth year and, in that time, has provided almost \$2m for Monash research. It has been a significant step in research funding, Professor West says.

But he expresses concern at the implications of a recent change in the funding allocation policy of the Australian Research Grants Scheme, under Ministerial direction, and the National Health and Medical Research Council. The change is tied in with the grading of research and research workers along lines of excellent/very good/good.

The policy of these bodies now is to concentrate larger grants on a smaller number of research projects — the "excellent".

Professor West says: "Although this provides better funding for the most outstanding research workers, it throws a greater burden on the universities themselves to support a larger number of 'very good' researchers who fail to secure ARG funds.

"In turn, this squeezes the universities' ability to fund 'good' projects. There is the real possibility that research, deserving of support, will not be able to continue."



Mal Logan new P-V-C

Professor Mal Logan, chairman of the Geography department, has been appointed Monash's new part-time Pro-Vice-Chancellor, succeeding Professor Bruce West.

Professor Logan joined the staff in 1971 and in the last 11 years has been both chairman and member of many influential boards and committees. For two years he served as Associate Dean of the Arts faculty.

In recommending his appointment to Council, the Vice-Chancellor, Professor Ray Martin, said: "In all these assignments, Professor Logan has demonstrated his capacity for leadership and a sensitive understanding of issues that affect the University as a whole."

A distinguished urban geographer, Professor Logan is a graduate of Sydney University and has held appointments there and at the University of Wisconsin.

He is the co-author of four books and has published extensively on urban geography and regional planning. In 1973 he was elected to the fellowship of the Academy of Social Sciences in Australia.

Professor Logan is currently chairman of the Australian National Committee for Geography and has been a consultant to the United Nations and Commonwealth and State governments. He serves on the editorial boards of a number of respected journals and publishing houses.



Aid sought for study on play behaviour

Volunteers are being sought to assist a study currently underway in the Psychology department on the play behaviour of young boys and girls aged 2 to 3½ years.

The study is being conducted by two honours students, Simone Kakalis and Carmel Ganguzza, under the supervision of senior lecturer, Dr Stella Crossley.

Their interest is in comparing the behaviour of children while playing in the presence of their mother with their behaviour while minded by a babysitter.

Observations are carried out in an equipped playroom in the Psychology department. This room is separated from an observation room by a one-way mirror allowing the researchers to unobtrusively study the child's behaviour. Sessions are videotaped for detailed analysis.

Volunteers required for the project are the mother, child and babysitter. The babysitter should be an adult person who cares for the child regularly for at least 10 hours a week. In addition to a professional childminder, this could include a relative such as a grandparent.

The study entails the group attending the Psychology department for four sessions (lasting about one hour) during the year. These could be scheduled for a Saturday or Sunday if convenient. Transport will be provided if required.

Volunteers should contact 541 3968 (b.h.) or 541 3908 (a.h.) and leave a phone number and a suitable time to be contacted.

● In the photo above by Vladimír Kohout, young Tim Johnson (left) and Tom Davies give their nod of approval to toys in the Psychology department playroom.

Maintain pressure for 'hard' money, US professor urges

Here's one academic who envies the amount of "hard money" that Australian universities are receiving to support research programs — but warns of some of the dangers involved in an over-enthusiastic pursuit of the "soft money".

He is American **Ralph Stephens**, Professor of Materials Engineering at the University of Iowa. He is currently spending three months' study leave in the Monash department of Materials Engineering.

"Hard money", Professor Stephens says, is the sort of money that comes from official federal government sources — either in recurrent funds for salaries, or in the form of grants for continuing research projects from government agencies such as ARGC, NH & MRC and NERDDC.

"Soft money" is the sort that academics and researchers — in America, particularly — have to go out and find for themselves from semi-government and private sources.

Professor Stephens says he has been greatly impressed by the standard of the laboratories he has inspected since he's been at Monash — and especially the number of people employed, apparently on guaranteed salaries, to monitor them.

"The recurrent fund money that you have here at Monash for support staff makes me very jealous," he said. "When I think of the type of productivity that we could achieve at Iowa with your set-up, it would be astronomical!"

BUT, he says — and here's the catch — "We have a general rule at our university that every faculty member must bring in \$30,000 a year in external funding."

That means, says Professor Stephens, that the 65 staff of Iowa's engineering college (with 1200 undergraduate and 400 postgraduate students, a little larger than Monash's Engineering faculty) must find more than \$2 million a year in external funds simply to keep their research programs ticking over.

Worse than that, he says, academics in the US are paid for only nine months of the year, so they must in any case find at least 25% of their annual income themselves.

Engineers and others in the physical and medical sciences are among the lucky ones, he says: at least they have certain federal agencies such as the National Science Foundation (NSF) and the National Health Institute to go to.

Intense pressure

"But for those people in history, say, or sociology — I just don't know where they get their money."

Even for those who have access to large national funding bodies, however, the pressure is becoming intense, says Professor Stephens.

"I have all but given up the National Science Foundation. I think there used to be a rule that maybe one out of three proposals would be funded, then it became one out of four; now it seems to be one out of five or six."

"Competition is keen and now that President Reagan has just about killed much of the federal government support we must go more and more to private sources for research money."

"And in seeking these external grants I wonder whether the expense of the bureaucracy involved doesn't almost equal the amount of money that is being divided up amongst the universities."

Professor Stephens says that, as the "normal" sources of research money begin to contract as a result of the new government policies, the money that is available is being directed more and more towards the military.

And there's an increasing tendency for academics to say: "Let's forget about the NSF — let's go to the US Army, the Marines, the Navy or the Air Force, and do research on things that will kill people."

"This is something I am not disposed to do. I don't think we should be designing tanks and aeroplanes at universities . . . but it's happening."

"The Army and the Defense Department have always funded a tremendous amount of research — although much of it has been basic — and while universities have in the past designed automobiles, now it's becoming more and more a matter of 'Design that tank!'"

Money or perish

According to Professor Stephens, "publish or perish" is an outdated concept — or at least it's taken for granted.

Today, the call is "get money or perish".

"Personally, I feel the pressure is too much," he says. "I believe I am a good teacher . . . a good researcher . . . I like to give service."

"But I am just so sick of the pressure to get money, money, money to keep my programs going at a rate that others might feel desirable."

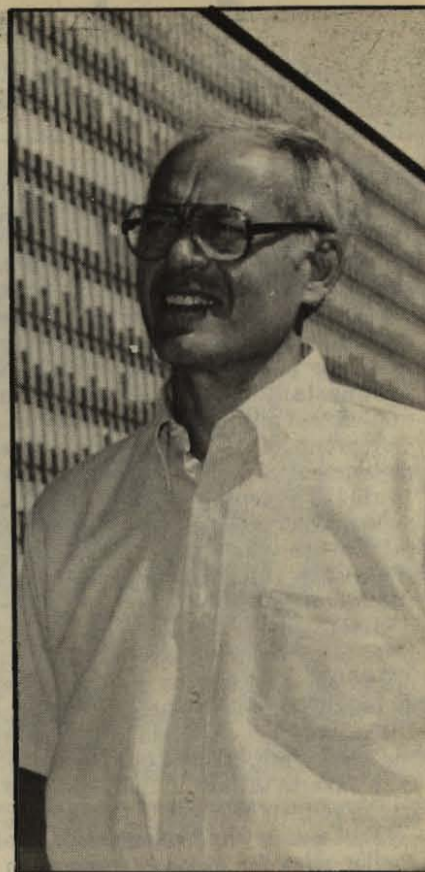
"The leverage is being applied to people at all levels, from the youngest to the most senior, and people are being promoted — even hired — on the basis of their ability to attract outside funding."

No results . . .

"Of course — and let me make it quite clear — we cannot exist without that additional money — and it's beautiful if you can get it easily. But more and more people are just having to spend more and more time trying to get it."

"And then, when the results don't come in . . . well, then, let me say that we fired a man just recently on the basis that he didn't have enough 'productivity'. He spent all his time trying to get money, but he didn't get it."

On top of all this, says Professor Stephens, there has been a tremendous growth in engineering throughout the



● Professor Ralph Stephens

US, and as the number of students has grown so, inevitably, has the quality of education fallen: where once there might have been three classes of 30 students each, now there might be one with 100 students — "and there is no way I can be as effective a teacher with 100 students as I was with 30."

In most cases, Professor Stephens says, American postgraduate students cannot get funding themselves. Most are being supported in their studies by external grants brought in by staff members, and continuity of study was problematical.

"Let's say you commit a group of students to a program: you have the moral obligation to keep on bringing in the money to support them."

"If I have a message for you in Australia, then, it would be this:

"There is no question that American universities cannot survive without external funding — and faculty will always be out seeking it. But in America, it has now gone too far . . . it's overboard. Getting money is now the prime concern."

"You in Australia will also have to go out after this money: but you should recognise that you must maintain pressure to keep up the level of 'hard money' — fixed government funding."

"You must make sure that the pursuit of money does not become a goal of the university rather than a means of accomplishing the university's proper goals."

"We in America have now too high a ratio of external money to fixed money . . . we're coming to the point where we're going to be losing quality people because they are just fed up with the rat race of getting money."

Appointment

A clarification of an article in last Reporter on the appointment of Professor Roger Valentine Short to a personal chair of Reproductive Biology at Monash: this is a joint appointment within the departments of Physiology and Anatomy.

Professor Short, at present director of the British Medical Research Council's Unit of Reproductive Biology, is expected to take up his appointment in May.

Changing face of funding

● Continued from P. 1.

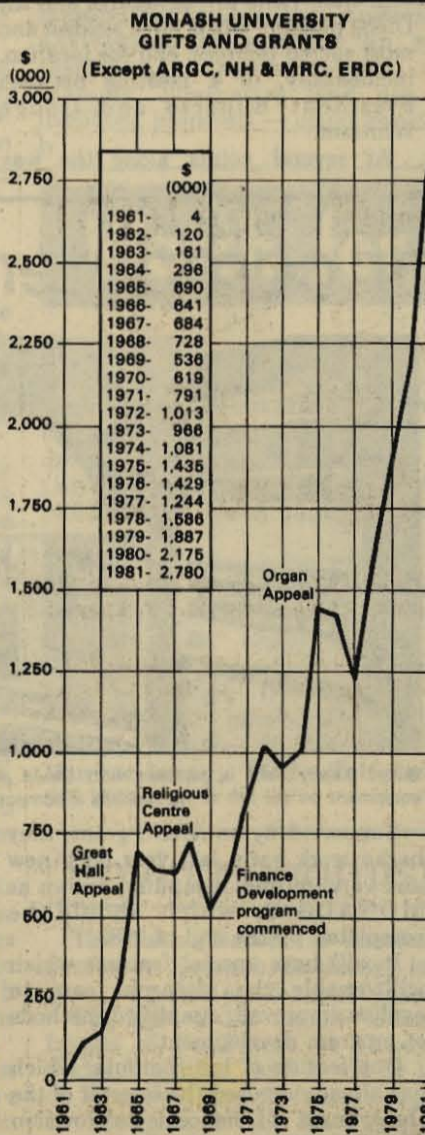
Overall, support for Monash research and other ancillary activities (again as distinct from recurrent funds) has grown dramatically — from \$2,902,000 in 1977 to \$5,766,000 in 1981.

This represents an increase of 98.7%, compared with a growth in CPI figures of some 57.5%.

The Vice-Chancellor (Professor Martin) told Reporter that, in the circumstances, these were gratifying figures — although there was little to be complacent about in the overall picture of education funding.

"We have, in the past couple of years, been able to attract some very significant support for our research effort, and the ingenuity and dedication of many of our researchers are now yielding valuable returns," he said.

"Among recent examples have been the support that British Petroleum is giving — a grant of \$450,000 over the next three years — to our oil-from-coal researches, and the recently concluded negotiations with Japanese interests to market a Monash-invented amplifying device which will net us some \$400,000 in the next two years."



Students gain insight on a neighbour

— And become TV personalities along the way!

Learning the language and about the culture of a country like Indonesia in the rarefied atmosphere of the Ming Wing is one thing — but actually experiencing the civilisation at first hand, staying with the people and conversing in Indonesian before a television audience of millions is quite another.

A group of 19 students from the department of Indonesian and Malay (with the exception of one, an HSC student) had the opportunity to do this early in the year. Led by Mr Basoeki Koesasi, a tutor in the department, the group spent two months in Indonesia during which time they became something of celebrities with numerous appearances in the press and on TV.

The students travelled together in the first month, hiring a bus to journey from Jakarta in Java to Bali, and were free to go their own way in the second.

Mr Koesasi, who has organised two similar trips for Monash students in previous years, believes that they play an important part in developing the students' language skills and cementing their understanding of the culture.

The group's visit was co-ordinated by the Indonesian Department of Education which opened doors to the Australians to give them an idea of how the country is administered.

In Jakarta, for example, they met the Governor and discussed with him such issues as how the city was coping with an influx of people from the country.

They visited the Parliament and talked with Ministers and administrators in such departments as Education, Foreign Affairs, Defence, Information and Youth Affairs.

On the road to Bali, the Australians called at several universities and often stayed with students and their families. They had a rare opportunity, too, to discuss studies with cadets at

Monash at large



the Indonesian Academy of Armed Forces, located at Magelang in central Java. Monash students, on one of the earlier trips organised by Mr Koesasi, were the first Western students to be given the opportunity to visit this Academy.

Mr Koesasi, who is Indonesian-born but has studied and worked at Monash since 1973, says that as well as introducing the students to "official" Indonesia and the tourist sights, the visit was designed to show them the diverse ways in which ordinary Indonesians live. To this end they visited a prosperous village like Cabaean and, on the other side of the coin, a poor village such as Gunung Kidul in Central Java where the inhabitants' diet contains little

vegetables or rice with obvious effects on their health and growth.

They witnessed too how foreign aid, although well-intended, can be inappropriately applied when the donor specifies a project with little understanding of the customs of the people. In Madiun they visited an orphanage complete with a donated landscaped garden — but no area for the children to play games such as soccer or badminton.

Among the cultural highlights of the tour were visits to Yogyakarta and the Dieng plateau, site of Java's oldest and most sacred temples, and the location, incidentally, of a meeting between President Suharto and Gough Whitlam.

At several points along the way

The Samurai sword Mr Basoeki Koesasi is holding is a quiet curiosity piece now but, so the story has been told, the stains on its blade are evidence of a more slashing past.

Mr Koesasi was given the sword by the manager of a youth hostel he and a group of Monash students stayed at on a tour of Indonesia early this year. The hostel manager had read about the group before they arrived and was impressed by Mr Koesasi's efforts promoting Indonesian culture in Australia.

An ex-army officer, the man told Mr Koesasi that during World War II, under orders from his commanding officer, he had used the sword to kill its owner — a Japanese soldier. He said that it had also been used to kill another Japanese officer — and was believed to have been used in the execution of Indonesians.

Mr Koesasi — who understandably had some explanations to give to airline officials on the return journey — is hopeful of tracing the weapon's history.

contact was made with people with Monash connections — either families of students here or "foster" children of staff.

One of the group, Andrea Wilson, says that the trip gave her an appreciation of the lives of Indonesians and brought home something of the drama of their history.

Andrea was one of the students featured in a 20 minute TV interview — in Indonesian. The group made the TV news several days running in Jakarta and they found their reputation preceded them en route.

Mr Koesasi has received numerous letters from Indonesians as a result of the publicity and the Indonesian section of Radio Australia — on the strength of correspondence it has received — has interviewed him. It is also believed that at least one female student featured in a press photo has received a marriage proposal!

West German Chair for computer scientist

Monash computer scientist Dr Les Keedy, who began the highly successful MONADS research project at Monash five years ago, has accepted an appointment as professor of Computer Science at the Technical University of Darmstadt in West Germany.

He will head the Research Group on Operating Systems — one of seven research groups which together form the faculty of Computer Science at the University.

His staff of six at Darmstadt will include a second professor and three other academics.

Dr Keedy told Monash Reporter this week that he hoped the MONADS project would continue at Monash under the leadership of Dr John Rosenberg, Mr David Rowe and Dr David Abramson.

It was his intention, he said, to set up parallel research at Darmstadt and to exchange information and ideas with the Monash group.

The aim of the MONADS project is to investigate improved methods for developing large software programming systems. Large

programming systems, because of their complexity, are plagued by problems such as high cost, difficulty of maintenance, and difficulty in adapting them from one type of computer to another.

"Software, as well as being difficult to transfer from one type of computer to another, is very expensive," he said. "It may take up well over 60 per cent of a computer installation budget."

Early in the research, the Monash group found that existing computers were not suitable for the improved software development techniques which they wanted to implement.

So, to overcome the problem they extensively modified a Hewlett-Packard computer. The modified computer, known as MONADS 2, turned out to be "good high-level hardware", but it had the disadvantage that it was rather slow and also had "a few strange features."

Dr Keedy's team decided that to meet their software development needs they would have to start from scratch and design and build a completely new type of computer.



● Les Keedy (left) is pictured with David Abramson and John Rosenberg (seated). The equipment on the left is the Monads II computer, designed and built by Dr Abramson.

Supported by an ARGC grant, they began work early last year on a new and very unusual computer, known as MONADS 3, which should be completed by the end of 1983.

It will have special features which will enable the research team to explore improved, simplified methods of program development.

One feature of the computer which has already aroused the interest of the Department of Defence, is its provision

for tight security control.

Dr Keedy says the computer will have "quite revolutionary features" which will make it much harder for an unauthorised person to obtain information from it.

Since 1978 the MONADS project has attracted more than \$160,000 in research funds from the ARGC, Monash Special Research Grants and the Australian Computer Research Board.

Close university link could aid Thai development

Closer links between Monash and Mahidol University, Bangkok, could strengthen Australia's contribution to Thailand's development, particularly in solving problems of the environment.

The Director of Monash's Graduate School of Environmental Science, Dr Tim Ealey early this year travelled to Thailand, as a consultant to the Australian Universities International Development Program, to discuss staff and student exchanges between his School and a similar one established at Mahidol by Dr Nart Tuntawiroon in, coincidentally, the same year, 1973.

(Dr Ealey attended the laying of the foundation stone of a new home for the faculty at a site in Salaya, near Bangkok. The ceremony was performed by Thailand's most senior Buddhist monk at the astrologically ordained time of 6.50 a.m. to 7.09 a.m.)

In an extensive tour of the country, Dr Nart and Dr Ealey identified potential environmental research projects on which the two Schools could cooperate.

Among other areas, Dr Ealey went to the heart of the "Golden Triangle" — the highland area on the border of Burma and Laos — where efforts are being made to discourage tribesmen from the cultivation of opium poppies and the manufacture of heroin.

A likely immediate result of Dr Ealey's visit is that four Thais — two academics and two research students — will be awarded fellowships to study at Monash this year.

The two academics will be seeking knowledge on oil — one on exploration and the other on chemical aspects. Deposits of oil and gas have been

discovered in Thailand recently but there is little expertise on these resources in the country.

The two students are expected to study for Master of Environmental Science degrees at Monash. In return, Monash students are likely to join Thai research projects.

Dr Ealey suggests that one possibility in the longer term is an Australian contribution to work among the people affected by the Khao Laem dam project.

Flooding of the valley of the Kwae Noi River by the dam will displace some 7000 people who are being resettled — not without opposition — by the electricity authority responsible for the project.

Local resentment

As it happens the Snowy Mountains Authority is under contract to the Thai Government to help construct the dam. Dr Ealey detects that some local resentment has rubbed off on Australians, previously well-regarded for their work on the Thai-Burma railway. He believes that Australian assistance in studies on the resettlement process — on, for example, alternative land use or livelihood proposals — could be timely.

Monash at large



● The flowered hillside looks pleasant — but this photo was taken in Thailand's Golden Triangle and Dr Tim Ealey (right), his wife Raya and Thai hosts Dr Nart and Mr Mans (left) are waist-deep in opium poppies, used in the manufacture of heroin. Dr Nart heads the Mahidol Environmental Science faculty; Mr Mans hopes to study at Monash.

Another possible Monash/Mahidol project, Dr Ealey says, is on the environmental problems associated with on and offshore tin mining near Phuket on the south-west coast.

There is a conflict here between mining and tourism interests and, in some areas, dredging is banned to preserve coral reefs. Experimental work is underway to minimise silt pollution but there is a complicating factor in that much illegal dredging goes on. The tin is smuggled to Singapore where there are three smelters.

With the onshore mines, problems of revegetation of fine tailings, often acidic, have been encountered.

At Doi Sam Mun in the Golden Triangle, Dr Ealey learned at first hand about the problems of a project to encourage the tribesmen to replace their opium poppy crops with such

crops as coffee. The official in charge of the project has encouraged the tribesmen to plant their coffee on his own pine plantations — as a protection against some of their members burning down his trees.

But the fact remains that, at current prices, coffee yields about half the profit of poppies.

Dr Ealey says, too, that there are fundamental agricultural problems in the region. The tribesmen have, to date, practised shifting agriculture but pressure of population has forced them to return to the same plots more frequently than is advisable. The result is an increasingly denuded, agriculturally worthless landscape.

Dr Ealey says that the stage may have been reached where the people should be encouraged to settle on plots, the fertility of which can be replenished by conventionally modern means.

AFUW Seminar

Monash will be the venue for the 1982 regional conference of the Australian Federation of University Women (Victoria branch) which will examine the topic "Genetic Research: Its Impact on Society."

The conference — to be held on May 29 starting at 11.45 a.m. in H3 of the Humanities building — is being hosted by the Southern Suburbs Group of AFUW (Vic.) which is based at Monash but attracts members from a wide area including Hawthorn, Doncaster and Brighton.

The AFUW is open to women of all ages who hold a university degree or its equivalent. An affiliate of the International Federation of University Women, the body seeks to promote understanding and trust founded on knowledge and respect among women in Australia and overseas.

Speakers at the conference, which is open to all, will include Professor David Danks, professor of Paediatrics at Melbourne University and director of the Birth Defects Research Institute, and Mr Justice Asche of the Family Court of Australia.

Professor Danks will discuss progress that has been made in the understanding of genetic disease in recent years and forecasts about the

Watch for these events

impact of recombinant DNA genetics on the diagnosis and prevention of birth defects. Mr Justice Asche will discuss the legal implications of recent developments in genetic research. A third speaker will consider the philosophical issues raised by such research.

Other activities being planned by the Southern Suburbs Group include seminars on "Technology and Women's Roles" (July), "Women as Consumers" (September) and "The Meaning of Work" (November).

For further information contact Mrs Pat Minton, 10 Omama Road, Murrumbidgee, 3163. Telephone: 568 1017.

'Enviroeconomist'

The distinguished US economist, Professor Kenneth Boulding, is to give two public seminars at Monash.

The topic of the first is "Forming Images of the Future: A Theory of Social Evolution" and it will be held on Thursday, April 29 from 12.30 p.m. to 2.30 p.m. in the Environmental Science seminar room. The second —

in the same location on Wednesday, May 26 from 5 p.m. to 7 p.m. — will be on "What Are 'Improvements to Environment?': Applying Human Values to Science". Both seminars are being organised by the Graduate School of Environmental Science.

Professor Boulding, of the University of Colorado, is in Australia as the R. I. Downing Fellow in Social Economics at Melbourne University. He is a former president of the American Economic Association.

The thrust of Professor Boulding's work has been on the implications for the other social sciences of recent thinking in economics. One of his current interests is an historical study of development.

Among his publications are "The Economics of the Coming Spaceship Earth", "Evolutionary Economics", "Ecodynamics: A New Theory of Societal Evolution", "A Preface to Grants Economics: The Economy of Love and Fear" and "Stable Peace".

For further information about the seminars contact exts 3839, 3840 or 3841.

52nd ANZAAS

A number of Monash academics will be contributing to this year's ANZAAS Congress to be held at Macquarie University, Sydney, from May 10 to 14.

The Congress theme is "Australia's Industrial Future".

Two Monash staff will present papers to a special interest seminar on occupational health and safety. They are Dr G. A. Ryan and Dr K. E. Brock.

Other Monash members presenting papers and their topics are: Dr G. F. R. Spenceley on the politics of unemployment in the Australian Depression of the 1930s (History section); Ms R. Bandt on the environment as musical composition (Musicology); and Dr J. O'Neil on an aspect of women working in the biological sciences (women's studies).

The ANZAAS program consists of 44 sections from architecture to zoology. Law and robotics are among the 1982 additions.

Music visitor

Professor Jose Maceda, of the department of Music Research at the University of the Philippines, Queson City, will be visiting the Monash Music department in May.

Addressing the 'real' questions

"Where do we go from here?"

That, according to Ms Helga Kuhse, research fellow in the Centre for Human Bioethics, is the most important ethical question raised by IVF.

Another important issue was IVF's priority in the allocation of scarce medical resources, Ms Kuhse said.

She devoted the main part of her paper to arguments against the common objections to IVF: "clearing the way", as she put it, "for discussion of the real issues".

Ms Kuhse said: "We should, instead of bickering about whether IVF is, for example, 'natural' or 'artificial', whether infertility is a disease or not, concentrate on what I regard as the real issues."

She continued: "The new techniques of being able to initiate life outside the body bring with them other possibilities as well. They bring with them the possibility of manipulating the genetic structure of this budding human life; there are the prospects of genetic engineering and cloning.

"There may be nothing wrong with the practices as such. On the contrary, we may be able to employ recombinant DNA techniques to eliminate many of the more than 3000 known chromosomal or genetic disorders and the children that will be born following such genetic 'surgery' will be glad that these techniques were available to make their lives better than they would have been.

"However, there is also the other side of the coin. In 1979, Dr Jonathan King, professor of Microbiology at the Massachusetts Institute of Technology, discussed the possibility of genetic engineering:

Scientists may soon be able to provide us with an addition to the human race: a class of three-armed people all owned by a private corporation. Their food supply would probably come first, four-legged chickens, for example, with the obvious advantage of two extra drumsticks.

"At the moment, the three-armed people are still in the realm of science fiction. But for how long? And if we could produce them, what moral arguments could we put up to counter such developments?"

"This is the real question: where do we go from here? If we have, with IVF, taken the first step towards being able to determine the nature of those who will come after us, what is their nature to be like? Will we be using our increasing knowledge for better or for worse? And what does 'better' mean?"

Ms Kuhse applied to the arguments commonly raised against IVF the rational 'tests' of consistency and universality.

Among these arguments were:

- IVF is not "natural".
- Infertility is not a disease.
- IVF constitutes unconsented involvement in research.
- It involves the risk of handicap.
- IVF is wrong because it involves killing innocent human beings.
- The embryo's potential entitles it to a right to life.

Ms Kuhse said: "If my arguments are correct, none of these is ultimately defensible on ethical grounds."

Does this mean that if IVF is morally acceptable then it is "good"?

"We can draw this conclusion only if we restrict our question to the practice of IVF as such, that is, without considering its possible wider consequences on society as a whole," she said.

"We must insert one of the philosopher's favourite phrases. 'Other things being equal', IVF is good because it helps a formerly infertile couple to parenthood and because the child, conceived by IVF, will presumably one day be happy that this technique has made his existence possible."

While we are all aware of the successes of IVF, there is a less happy side rarely seen by the public — the problems of adjustment that can arise for couples who have been unsuccessful on the program.

(At present the Monash team is achieving a 15 to 20 per cent success rate.)

These problems were highlighted in a paper written by two social workers, Mrs Kay Oke, of the Royal Women's Hospital, and Ms Jan Aitken, of the Citizens' Welfare Service of Victoria.

Mrs Oke and Ms Aitken said that couples on the program were exposed to complex stresses which they often managed with great resourcefulness and strength. They said that the IVF teams were developing methods for dealing with such stress in patients. Social work services and self-support groups like the IVF Friends had an important role to play in strengthening those methods, they said.

The law failed to provide adequate protection for principal participants in the IVF program — the clinician, prospective parents and future child.

It also failed to define satisfactorily their relationship, said Mr Alan Rassaby who last year conducted a study on legal issues related to IVF for the Centre for Human Bioethics.

Mr Rassaby said that if society was to take the benefits of an ever-increasing ability to alter nature, it must have adequate mechanisms to ensure that future children were compensated for mistakes.

He said: "The case by case approach of the common law, while it is sufficiently flexible to achieve this end, has been slow in evolving.

"For this reason, I believe that what is now needed is for law makers in all States to clarify the whole area of compensation for preconception and pre-natal injury.

"The statutory clarification should effect the principle embodied in recent decisions in Victoria by acknowledging the right of a child to bring an action in respect of any injury caused to him intentionally, negligently or by breach of statutory duty if the act or omission complained of occurred prior to conception."

Mr Rassaby said that a measure of protection for the prospective parents existed in the requirement that the clinician obtain their full and informed consent. But he doubted that this adequately covered the parents' interests.



Professor Carl Wood:

Community agreement to IVF not 'carte blanche' for other research in human reproduction.



Mr Alan Rassaby:

The law does not provide adequate protection for the doctor, prospective parents or future child.



Ms Helga Kuhse:

Where do we go from here? That's the question following from IVF work we should be examining.



Dr Alan Trounson:

Freezing and preservation of embryos is essential in the development of correct IVF procedures.

IN THE MAY REPORTER:

- Medical resource allocation: the realities
- How the Australian media has handled IVF.

Facing the 'crisis' of infertility

The social workers said that each couple in an IVF program brought to it their own experience of the "crisis of infertility". Quite often, infertility was a source of deep distress and the trigger for fears, real and imagined. Feelings of isolation, insecurity, helplessness and anger were common.

"People who have been told they are infertile are in the unique position of grieving for the loss of something they have never had," Mrs Oke (delivering the paper) said.

The normal pattern over time, however, was toward adjustment and a "relocation of fertility in other areas". Quite often at this stage the couple experienced a greater closeness and their relationship was strengthened.

Mrs Oke and Ms Aitken said that IVF currently offered a great deal of hope to many and a chance of pregnancy to a few, where before there would have been neither.

The risk was, however, that the waiting and hoping of couples on the IVF program or attempting to join it could hold up the adjustment process that may eventually have to be faced.

The peak of hope and excitement as infertility was challenged could be followed by an unparalleled low.

The social workers said that there were other factors placing stress on IVF couples.

For example, they had to make their decisions in the light of public questioning of the ethics of IVF. Uncertainty was compounded by calls for a moratorium on this work.

And, while creating a baby usually belonged exclusively to a couple, IVF meant having to share this with a group of scientists, technicians and medical staff.

"Couples are required to trust several possibly unknown people to make decisions for them and care for their potential babies," they said.

The law fails to protect IVF participants

"For instance, suppose that a clinician negligently drops a petri-dish containing an 8-16 cell embryo. Alternatively, suppose that he discards the embryo after discovering some abnormality in its chromosomal structure.

"In the present state of the law, it is unlikely that the prospective parents would have legal redress in either situation.

"To begin with, the law does not recognise a property right in human tissue. Therefore it could not be said that the clinician's action constituted a trespass to property.

"Secondly, it is unlikely in the current state of the law that the parents could be said to have suffered compensatable harm. The right of a parent to compensation for the death of a child is dependent *inter alia* upon the child being born alive. This is because legal personality begins at birth. If death occurs prior to birth, no one can be said to have been harmed and no duty of care breached."

Mr Rassaby said that the law was equally poorly equipped to resolve a conflict between the prospective parents themselves. Such conflict could arise, for example, from the embryo freezing process.

He put forward this case: "A substantial period of time may elapse from the point when a couple enters the IVF program until the time they decide to have a child. The couple might now disagree about the future of the embryo. Both might seek custody of the embryo or one might wish it to be discarded or give

consent wishes difficult equal n

Mr F too, in parents

"Sho the pro used fo produc

He d donati body of the dor senior

"The tie mig proch he said

In liq stresse regulat

"Ma defuse commu attempt

"It require between research

Test-tube life — the reality and some possible developments

Techniques of in vitro fertilisation and embryo transfer in the human were developing fast, Professor Carl Wood told the conference.

Society could now look forward to a time in the near future when these techniques would be widely available as a more successful and cost-effective alternative to much tubal reconstructive surgery, he said. They also offered hope in overcoming some seminal, cervical and idiopathic (or unknown) causes of infertility.

Professor Wood is chairman of the Monash department of Obstetrics and Gynaecology based at the Queen Victoria Medical Centre and heads the world's most successful IVF team.

Speaking in the first session, he "set the scene" by describing the process of

IVF and embryo transfer. Both he and a fellow team member, Dr Alan Trounson, surveyed some of the possibilities IVF techniques might open up. Dr Trounson divided these into ones that were now technically feasible and others which may arise through future developments.

Dr Trounson said that essential to the development of correct IVF procedures and an enhanced success rate was the freezing and preservation of human embryos.

Developing a technique for preservation of embryos would meet a number of situations which can arise making it desirable to delay transfer of the embryo back into the mother's womb until the next cycle.

Dr Trounson said that the Monash team, supported by the Queen Vic. ethics committee, saw embryo freezing as an ethical obligation in IVF. The alternatives would be disposal of excess embryos or their commitment to more academic research interests — work on, for example, embryo structure or biochemical function.

Given the development of successful freezing procedures, Dr Trounson previewed the development of embryo banks, along the lines of existing sperm banks, for the use of infertile couples.

Dr Trounson said IVF also had the potential to aid the treatment of male infertility. It appeared that in vitro conditions favoured successful fertilisation over normal conditions in cases where the male's sperm had a low count or poor motility or where either partner possessed sperm antibodies.

Another possibility, raised by both Dr Trounson and Professor Wood, was that of the use of donated eggs in a procedure analogous to artificial insemination by donor. The patient here would nurture in her womb an embryo — the product of her partner's sperm and a donated egg.

Dr Trounson also discussed the possibility of "surrogate motherhood" in which a woman would "donate her womb" for the transfer of an embryo and ensuing pregnancy. Dr Trounson said, however, that this procedure raised serious legal doubts which would rule it out as a practice in the present environment.

Other long-term possibilities, he said, were the transfer of embryos of known sex, the removal of embryonic cells for the determination of genetic disease, and the use of embryonic cells and tissues grown in vitro for the repair of damage in children or even adults.

IVF: The Issues

IVF is the 'linchpin' on future

In vitro fertilisation and embryo transfer represented a direct and systematic intervention in the origins of human life.

Dr Joseph Santamaria, director of Community Medicine at St Vincent's Hospital, said that current research and methodology raised serious questions about human experimentation and rights.

Dr Santamaria said that IVF and ET could not be seen in isolation from other developments in the biosciences. Among these were the freezing and splitting of embryos, cloning, genetic engineering, embryo banks, ovum and sperm banks, and the use of embryonic and foetal tissues.

The technology of IVF and ET, he said, was the linchpin which could determine the future development of man and the nature of society.

So far-reaching were the possible effects on human life and the individual's rights and freedom that scientists could no longer exercise sole judgement in this field, he said. It was essential that the public be fully informed about the nature of the procedures and of the research, as well as the implications of accepting a particular philosophical viewpoint.

In conflict

He suggested that two philosophical schools were in conflict. One, he said, ascribed "inherent" rights to human life; the other took a utilitarian approach. IVF work adopted the latter philosophy, he said.

The utilitarian approach asserted that the embryo possessed no inherent right to life, neither did the foetus nor indeed the human (in cases, say, where he was defective).

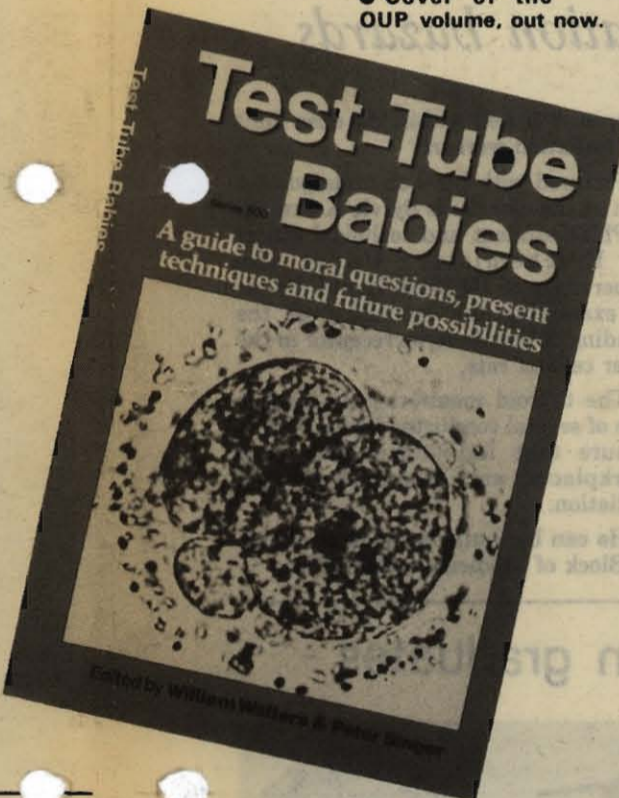
Dr Santamaria said that if rights were not inherent then the conferring of them became a matter for the community — a situation which threatened the basic structure of society.

"If we can eliminate people not 'qualified' to be human then we must set up a group to decide what the essential qualities are," he said. In his view, elimination of the patient was not a true option.

Dr Santamaria said that principles on the value of human life were embodied in the UN Declaration of Human Rights, the Nuremberg Code and the Helsinki Declaration of Human Experimentation.

The onus of proof rested heavily on those who would seek to change those principles, he concluded.

● Cover of the OUP volume, out now.



Leader puts 'yes' case

Agreement to IVF by the community did not allow scientific freedom to pursue other lines of research in reproduction, Professor Carl Wood said.

He was discussing the view that IVF encouraged the pursuit of other experiments which may be generally regarded as unethical such as the creation of a chimpanzee-human hybrid or certain types of cloning experiments.

As justification for IVF, Professor Wood cited the Declaration of Human Rights which states the right of every individual to have children. He added: "Codes of medical ethics since Hippocrates have emphasised the doctor's duty to relieve suffering, a variety of which is exemplified by the infertile patient."

He said that arguments had been made against the work on the grounds that the conception was "dehumanised" or "unnatural" as it

did not involve the act of bodily love and sexual intercourse.

"The accusations are true," he said, "but the couples involved more than offset these disadvantages by their strong emotional commitment to attempting conception and their strong desire to have a child. In addition, the act of bodily union is not essential to religious belief (for example, Christ's conception) nor is sexual intercourse necessarily an act of love."

Professor Wood said that the main ethical objection to the work was that the effects — psychological and physical — on the offspring of IVF were, as yet, unknown.

"The question can only be answered when sufficient offspring have arrived from this technique. Until sufficient offspring have been carefully studied, it would seem prudent to restrict IVF research to units capable of carefully monitoring the pregnancy, birth and child-rearing period," he said.

Pippin — and a mother's plea

The scene-stealer at the conference was eight-month-old Pippin Jaimee Brennan, daughter of Len and Jan Brennan — the world's 13th test-tube baby.

A few healthy cries from Pippin punctuated addresses by her parents on the important turn IVF had given their lives.

Making a strong plea that the IVF program be allowed to continue, Mrs Brennan said: "My existence would have been pointless if I had been denied the opportunity to be Pippin's mother."

She said that she could see "nothing suspect" in a procedure that had the potential to bring happiness to many couples through "the chance to have a much-wanted baby".

Following extensive emergency surgery several years ago, Mrs Brennan was told that she could never have a child.

"I thought: Why me?" she said. "I felt emptiness and sadness... isolated and alone."

Mrs Brennan said that she had always believed her career in life was to be a mother and held fears that, being infertile, her relationship with her husband would suffer.

She denied that the strong desire to have children was merely an indulgence of ego.

"We wanted a child to love, not because it would look like Len or me," Mrs Brennan said. "We will be eternally grateful to the IVF team who made it possible."

participants

consent to experimentation upon it, contrary to the wishes of the other. In whose favor should this difficult issue be resolved, given the essentially equal nature of their contribution?"

Mr Rassaby said that legal difficulties could arise, too, in the event of the death of the prospective parents.

"Should the frozen embryo be discarded, become the property of the next of kin or go into a pool to be used for the benefit of women who are unable to produce their own ova?" he asked.

He drew an analogy with the law relating to organ donation. An organ may not be removed from the body of a person unless that person has consented to the donation prior to death or, failing this, where the senior available next of kin consents to its removal.

"The importance in our community of the blood tie might be good reason for adopting the same approach with respect to the use of human embryos," he said.

In light of the slow evolution of law, Mr Rassaby stressed the importance of professional self-regulation.

"Many of the potential legal conflicts could be defused if members of the medical and scientific community are able to anticipate the problems and attempt to provide solutions in advance," he said.

"It seems hardly necessary to add that this requires a greater interchange of information between the proliferation of groups carrying out research in this area than is currently the case."

More funds for innovative teaching...

The Vice-Chancellor has provided additional funding this year towards a scheme to promote innovation in undergraduate teaching at Monash.

It is known as the Teaching Improvement Projects program (TIPs) and administered by the Higher Education Advisory and Research Unit. Several TIPs were funded from \$6000 provided by the V-C for a pilot program last year.

The Director of HEARU, Dr Terry Hore, says that the scheme aims at encouraging academics to try new educational practices — whether it be, as examples, in the preparation of teaching materials or assessment methods.

Dr Hore says that it is a small grants program (typically they are in the order of \$500 to \$750) to give some incentive for teachers to start thinking



● Dr. Hore

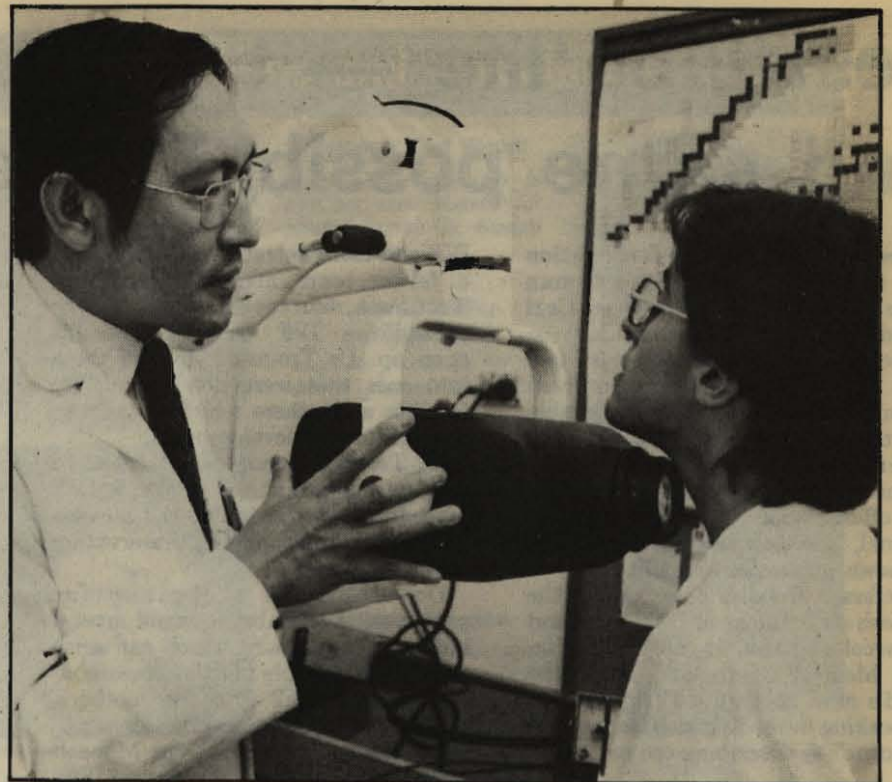
about innovation and get projects off the ground that would otherwise be frustrated by funding pressures.

He says that TIPs applications in 1982 may be made at any time but advises early consideration as the fund is small. A brochure obtainable from Dr Hore's office outlines the application procedure.

Although quite a few of the proposals put forward last year were for assistance in the production of audio-visual teaching materials, Dr Hore says that the selection body — a sub-committee of the HEARU Committee chaired by the Pro V-C — holds no tight preconceptions on the type of project.

He lists the function of the Teaching Improvement Projects as these:

- To identify major problems in areas of the curriculum, the learning teaching process and the utilisation of staff, financial and physical resources.
- To stimulate and conduct research which will suggest solutions to identified problems.
- To undertake projects and studies which give promise of improving both the quality and efficiency of the undergraduate programs.
- To support and provide service to groups interested in experimentation with new procedures and methods in learning and teaching.
- To identify and communicate progress in research, experimentation and implementation.



Monitoring radiation hazards

The above piece of equipment, as awkward as it might appear, has one vital function: the radiation safety of people at Monash who work with potentially hazardous radioactive materials.

It is a thyroid monitor constructed by the University's Radiation Protection Officer, Mr Teng Tan, and used by him in his new laboratory in the Medical Faculty to routinely check users of radioactive iodine (iodine-125 is particularly useful in biomedical research). There are about 40 users who are being regularly monitored this year. Since the installation of the monitor, the average thyroid level of iodine-125 here has shown a marked

drop and is well within the dose limit for radiation workers.

Pictured with Mr Tan undergoing a test on the monitor is Sylvie Keleman, a Ph.D. student and technical officer in Biochemistry. Under the supervision of Dr Mick Gould, Sylvie is examining the regulation of the binding of insulin to its receptor in the liver cells of rats.

The thyroid monitoring program is one of several conducted by Mr Tan to ensure that individuals and their workplaces are protected against radiation.

He can be contacted in room BG09, B Block of Medicine (ext. 3593).

An experiment in medical education

The medical course is long and perhaps unique with, in most schools, its separation of preclinical from clinical training.

It may be two or three years, then, before knowledge gained in the basic sciences is applied. Just how much of this knowledge is retained by the medical student by, say, his final year?

In a two-year Teaching Improvement Project, Mrs Pat Shaw, a principal tutor in Biochemistry, has set out to answer this question.

Mrs Shaw says: "I am seeking to identify those areas of the pre-clinical curriculum which are poorly remembered by clinical students. In terms of clinical importance, these areas may therefore require strengthening or perhaps de-emphasising."

"This information could be of help in Monash Medical faculty plans to construct a new curriculum based on 'vertical integration' and reprise seminars which will include early teaching."

The approach adopted by Mrs Shaw has been to submit to sixth year students test papers of multi-choice questions used by the departments of Anatomy, Biochemistry, Physiology and Pharmacology in third year examinations. She has prepared three

papers each containing 10 items from each department.

Both the original and resubmitted questions were computer marked and analysed, allowing an objective comparison of performance.

In a preliminary report, Mrs Shaw says her testing shows a fall in performance by the sixth year students in all areas, the greatest loss being in Biochemistry and the least in Physiology.

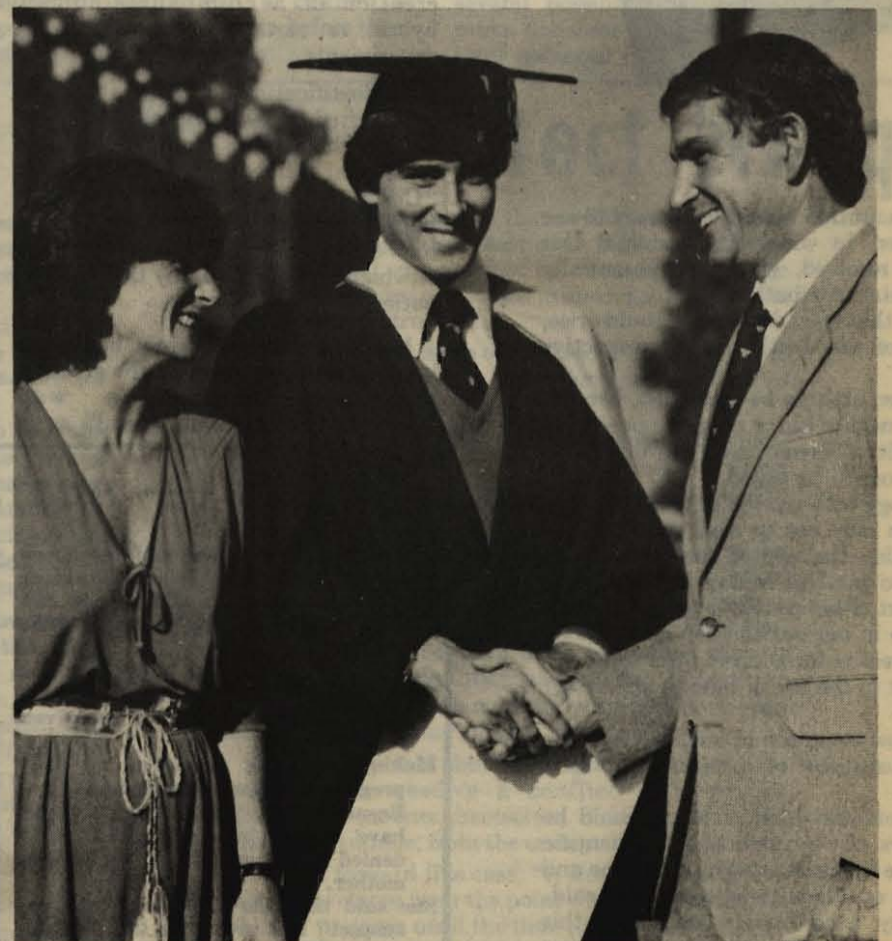
She says: "While there may be various explanations for the differing degrees of retention in each discipline, an analysis of the content of the individual questions suggests that the extent of reinforcement by clinical teaching may be a major factor."

Mrs Shaw says that one of the motivations for her study was the feedback she has received from later year students and newly graduated doctors.

Her interest in medical education was strengthened during an outside studies program in the US in 1980 in which she examined teaching of biochemistry in medical schools.

She believes that Australian medical courses could be improved by greater consultation between colleagues teaching in pre-clinical and clinical years and with groups such as graduates and the professional colleges.

Ron Clarke's son graduates



● Former long-distance runner Ron Clarke and his wife Helen congratulate their son Marcus on obtaining his Bachelor of Economics degree. Marcus still has two years to complete a law degree.

Gillian wins engineering award

Several years ago Monash's Engineering faculty launched a campaign to encourage women to take up the challenge of studying in the male-dominated engineering profession.

While females still make up a small proportion of the faculty's students, at least one of their number has been breaking through some of those hoary old misconceptions about women only excelling in certain fields.

Showing her mettle (so to speak) has been Gillian Heintze, a Ph.D. student in Materials Engineering, who has been awarded one of two of the first Sir William Hudson Memorial Awards by the Australian Welding Research Association. Last week Gillian travelled to Sydney for presentation of the award by the Federal Minister for Science and Technology, Mr Thomson.

The awards were established last year to commemorate the work of Sir William Hudson, a chairman of the Snowy Mountains Authority and foundation chairman of the Australian Welding Research Association. They take the form of a contribution towards salary and expenses (in Gillian's case, supplementation of her Monash Graduate Scholarship stipend and payment of Union fees) and equipment costs.

Gillian is part way through a research project on grain refinement and solidification cracking during submerged arc welding of steel. Her work is being supervised by Associate Professor Reg McPherson.

Gillian's entry to Materials Engineering in 1980 marked a break from her first degree studies at Monash. She completed a B.Sc. honours degree in Physics/Astronomy, writing her thesis on short period variable stars.

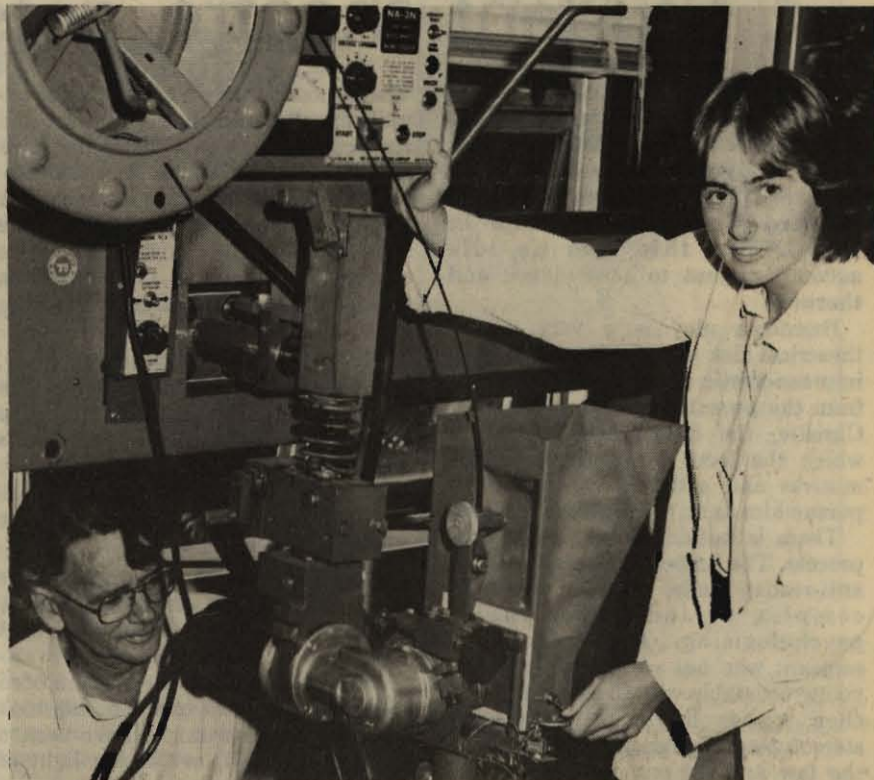
Brought up on a farm at Minyip (north-east of Horsham) in the Wimmera, Gillian has been welding since her early teens. But the home welding of farm machinery and the like is a long way from the automatic industrial welding rigs with which she now works.

She is examining methods of improving the structural properties of large-scale welds in steel and the prevention of hot cracking.

Gillian explains: "Any arc welding process involves the melting and solidification of metal. In general, welding is carried out without any subsequent heat treatment and so the weld deposit is an 'as-cast' structure with columnar grain (or crystal) growth.

"This structure has inferior mechanical properties compared with the material being joined. In the critical situations in which large-scale welds of steel are made it is vital they be as good as possible. Thus it is desirable to modify the weld deposit to produce a refined microstructure with better mechanical properties."

Specifically, Gillian is exploring the use of agents known as inoculants which are added in powder form to a groove in the steel specimen before welding. She then conducts mechanical tests on the resulting weld



● Gillian Heintze conducting an experiment on a large-scale welding rig. (Left) Associate Professor Reg McPherson. Photo: Julie Fraser.

and examines the structure to see if it has been refined.

She expects to submit her thesis in 1984.

Gillian says it is a pity that the number of females studying in the technological field is small. She

believes that the problem lies in the later years of high school when females tend to be discouraged from studying mathematics and physics thus closing off certain options in higher education.

Gillian has a brother studying at Monash — and a sister who keeps up the good work, full-time, on the farm.

Honorary degree for Professor Cochrane

There is no academic economist in Australia with a wider or more distinguished "repertoire" than Emeritus Professor Don Cochrane.

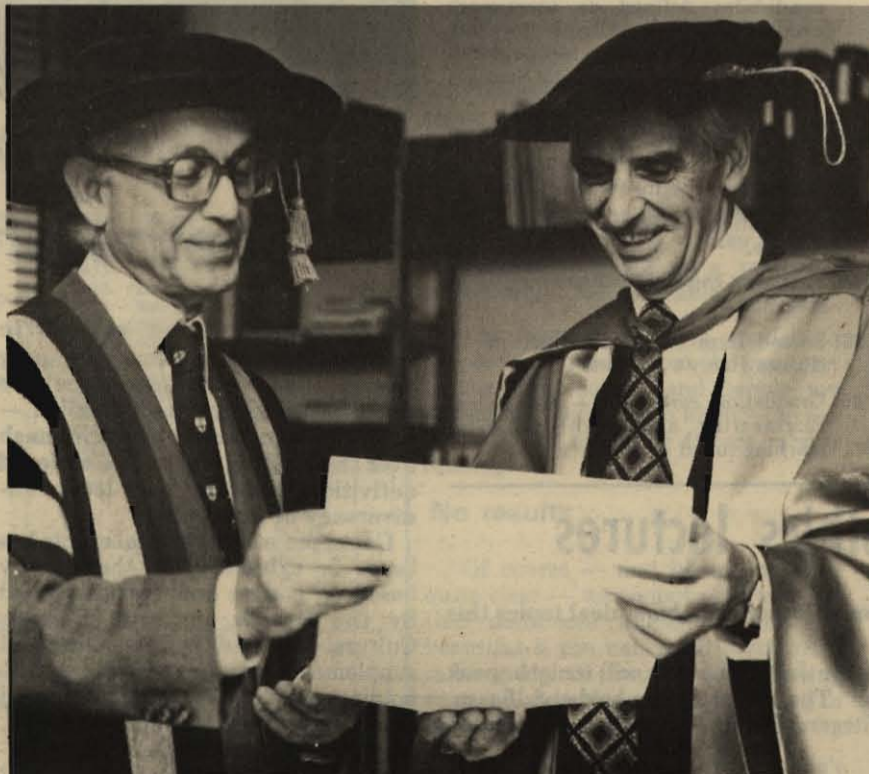
The Vice-Chancellor, Professor Ray Martin, said this in citing Professor Cochrane — who retired last year as founding Dean of the Economics and Politics faculty — for an honorary degree at the ECOPS graduation ceremony on March 26. It was the degree of Doctor of Economics — the first such one awarded by the University.

Professor Martin said that Professor Cochrane's academic interest has been mainly in applied economics.

The V-C said: "In these days of specialisation, he is one of those rare economists who can apply himself with equal skill and wisdom to a wide range of practical issues in such diverse fields as money and banking, taxation and public finance, transport economics, industrial economics, labour economics and labour relations, social accounting and statistics.

"This is demonstrated not only by his writings but also by the many public committees on which he has served."

The list of bodies with which Professor Cochrane has been associated includes the State Bank of Victoria, the Commonwealth Bureau of Roads, the Defence Industry Committee, the Export Development Council, the Commonwealth Advisory Committee on Educational Television, and the



● The Deputy Chancellor, Dr Joe Isaac (left) presents Emeritus Professor Don Cochrane with his honorary degree of Doctor of Economics.

Australian Trade Union Training Authority.

Among other inquiries for government, he has advised on parliamentary salaries and examined the question of electricity charges to

the Alcoa aluminium plant at Portland.

Professor Cochrane was educated at Melbourne and Cambridge universities. During his time at Cambridge he earned enduring inter-

national recognition for a pioneering contribution to the then infant discipline of econometrics.

He worked at Melbourne University before joining the Monash staff in 1961.

"He guided the faculty of Economics and Politics through its exhilarating years of rapid growth as well as the more difficult years of consolidation," Professor Martin said.

The Economics department — under Professor Cochrane's chairmanship for the first 14 years — grew to be one of the largest in Australia, developing an international reputation for the quality of its staff and students.

Graduate scholarships

The Registrar's department has been advised of the following scholarship. The Reporter presents a precis of the details. More information can be obtained from the Graduate Scholarships Office, ground floor, University Offices, extension 3055.

German Academic Exchange Scholarships 1983/1984

- For advanced study in Germany:
- Scholarships available to honours graduates who are Australian citizens. Value: Approximately 770DM per month, plus other allowances.
- Travel grants available to postgraduate scholarship holders. Value: Return economy air fare. Closing date July 2.

Student theatre gets off to a flying start

Lunchtime theatre may never be quite the same again. Student productions at Monash for 1982 got off to a flying start with Monash Theatre Workshop's presentation of Howard Brenton's 'Christie in Love'. But this was no idle accompaniment to sandwiches and thermos.

Brenton's play is a very potent theatrical kick in the stomach. It is an impressionistic sequence of fragments from the pursuit and interrogation of Christie, the multiple murderer, in which the focus is as much on the motives and attitudes of those who pursue him as on the criminal himself.

There is nothing subtle about this process. The scope of the play, and its anti-realist mode, preclude anything complex or individual in its psychologising. The red-necked sergeant who has seen it all, and the young constable who likes looking and then wishes he hasn't, are both stereotypical figures. They represent the law and society; more presumptuously, they purport to represent us.

In the end, Brenton's "theme" seems to me to be one of those theatrical premises which works powerfully as long as it is not considered too closely.

The notion is that we are all "screwed-up" sexually, and that our covert and respectable kinkiness both produces men like Christie and morally pre-empted our condemnation of them. The constable's obscene limericks, the sergeant's obsessiveness, the audience's voyeurism, enable some striking images but offer pretty thin substantiation of this thesis.

The play's title looks like an irony, but the degree and direction of the irony is not clearly defined by the action. Christie keeps his love objects hanging in a cupboard, in the garden, and under the floorboards. Well, implies Brenton, I guess we all have our little peculiarities.

The theatrical potency, though, was much in evidence in Rod Charl's production on the floor of the Union Theatre. The audience clustered in uneasy close-up around the small fenced area in which most of the action took place — the area might have been a garden, or a cell, or (in the light of Christie's predilections) a grave/bed.

All three performances stood up to the pressure of maintaining, at very close quarters, the intensity and momentum on which the piece

depends. Robert Williams as the sergeant, Bruce McKinnon as the constable, and Philipp Rowe as Christie, all gave disciplined performances which mostly avoided the dangers of registering stereotypical emotional qualities by stereotypical mannerisms.

Their interaction was of the kind which makes it rather pointless and unfair to make comparative judgments; this was very evidently a production to which all had given thought and commitment. The episodic structure of the piece, and the confusion or lack of development in some of its central ideas, encourage effective fragments, and there were indeed some memorable images along the way; but what was particularly

impressive about this production was how far it managed, for all that, to create a coherent style.

I suppose it's not to be wondered at that audiences were small — lunchtime audiences mostly are, and this play perhaps promised to be a little too grisly for most digestions. But it deserved bigger houses. Of the couple of hundred who saw "Christie in Love" during its run a good many will have found very little to like, but at least a good deal to be impressed by and to remember.

The 17,000 members of the university community who didn't support this production missed an interesting one.

Peter Fitzpatrick
Department of English

Important dates

The Registrar advises the following important dates for students in April:

Confirmation of Enrolment forms will be posted early this month to all currently enrolled students. The forms will list the subjects and units for which a student is enrolled. The forms should be checked, amended where necessary, signed and lodged at the Student Records Office by April 16. Late fees will be imposed for forms not returned by that date.

- 9: Good Friday holiday.
- 10: First term ends for Medicine V.
- 12: Easter Monday holiday.
- 13: Easter Tuesday holiday.
- 14: First teaching round begins, Dip.Ed.

Graduation ceremony — Science. Students who have not received a Confirmation of Enrolment form through the post should call at the Student Records Office to complete and lodge a replacement form.

- 16: Last day for all currently enrolled students to lodge their Confirmation of Enrolment forms at the Student Records Office before late fees are

imposed. Students who lodge their forms after this date will incur a late fee calculated at the rate of \$5 for up to one week late; \$10 for between one and two weeks late; \$20 for more than two weeks late. Last date for discontinuation of all studies by not-for-degree, diploma, bachelor degree and Master preliminary candidates, and by Master candidates defined as coursework candidates, to be eligible for 75% refund of the 1982 Union fees paid (not applicable to students taking Summer Term subjects).

- 17: First term ends for Medicine VI (Prince Henry's students).
- 19: Second term begins for Medicine V.
- 21: Graduation ceremony — Law and Science.
- 24: First term ends for Medicine VI (Alfred students).
- 26: Second term begins for Medicine VI (Prince Henry's students).
- 30: Graduation ceremony — Education, Engineering and Medicine. First teaching round ends, Dip.Ed.

Mannix bioethics lectures

Mannix College has organised a series of lectures on bioethical topics this term.

Senior lecturer in Community Practice, Dr John Murtagh will tonight speak on "Ethical Questions in Medical Practice". The lecture will be held at 8.15 p.m. in the ground floor seminar room of the Fitzgerald Wing — the time and location of other lectures in the series also.

These will be:

- April 13, Dr Larry Osborne, deputy medical superintendent at the Austin Hospital, "Definition of Death".
- April 20, Dr Joseph Santamaria, director of community medicine at St Vincent's Hospital, "In Vitro Fertilisation and Embryo Transplantation".
- April 27, Mr Kevin Andrews, Law Institute of Victoria, "Laparoscopy, Life and the Law".
- May 4, Dr Laurence Fitzgerald, St Dominic's Priory, "Conscience and the Moral Law".



● The Consul-General in Melbourne of the FDR, Dr Karl-Heinz Scholtizek presents the Goethe Prize to student Michael Kertesz.

Goethe anniversary

The literary and scientific contribution of Johann Wolfgang Goethe — who is to German culture what Shakespeare is to English — has been commemorated at Monash over the last few weeks in a series of activities marking the 150th anniversary of his death.

Centrepiece of the special events has been an exhibition in the Library based on posters and books provided by the Goethe Institut (German Cultural Institute) in Melbourne and supplemented by the extensive Goethe holdings of the Monash Library and contributions from private collections, including that of the Deputy Consul-General in Melbourne of the Federal Republic of Germany, Dr Manfred Osten.

As well, numerous lectures and seminars on Goethe's works have been organised by the department of German, the Centre for General and Comparative Literature and the Victorian branch of the Australian Goethe Society.

The exhibition was opened on March 22 by the Consul-General in Melbourne of the FDR, Dr Karl-Heinz Scholtizek who also presented the Goethe Prize (for the best first year student in the department of German in 1981) to Michael Kertesz and a gift of books to the Library.

Goethe's central contribution to world literature is the drama "Faust" which he began at 21 and finished only a few weeks before his death at age 82. Faust takes a place alongside Hamlet, Don Juan and Don Quixote as figures forming the mythology of modern Western man.

Goethe has often been called the last "universal German" in the sense of the classical and renaissance concept of a man giving full expression to his intellectual and emotional capacities. As well as his literary efforts he was an eminent scientist in the fields of zoology, botany and optics. He was also an accomplished graphic artist and efficient stage manager.

Greek attitudes to homosexuality

The overt exploitation of homosexuality as a motif in art and literature was a distinctive feature of ancient Greek culture from about the 7th through to the 5th century BC.

One of Britain's most distinguished classicists, Sir Kenneth Dover, said this in a public lecture at Monash recently on "Greek Homosexuality". Sir Kenneth is President of Corpus Christi College, Oxford, and an immediate past president of the British Academy. He was knighted for his services to Greek studies in 1977 and last year made a BBC-TV series titled "The Greeks". His visit to Monash was organised by the Classical Studies department.

Sir Kenneth said that our knowledge of homosexuality in ancient Greece, based as it is on evidence in art forms such as vase paintings and poetry, is incomplete. What does seem clear, however, is that the ancient Greeks did not classify a person as either a "homosexual" or "heterosexual" but accepted that the potential for both forms of sexual behaviour could exist without conflict in the same person.

However, he added, certain conventions seem to have governed their homosexual relationships — conventions which bear a striking similarity to those governing male/female relationships in less remote times.

Central to the Greek male homosexual relationship, he said, was the distinction between active and passive partner. The distinction was made along lines of age and social position. The older person through gifts, services and entreaties secured the (passive) sexual favours of the younger male, whose physique was celebrated as the pinnacle of human beauty.

In such a relationship the youth could be expected to feel gratitude, admiration even affection for the older man who became his mentor. But the subordinate did not accept that the subordinate should feel desire for the dominant.

Sir Kenneth said that this brought to mind less distant notions of the male as the pursuer of sexual desire and the "good" woman as a person who admires and submits to her partner but does not actively pursue sex. The woman who does so is depicted as depraved and dangerous.

Sir Kenneth said it was now a matter for conjecture why homosexuality found ready acceptability in Greece (this was certainly not the case in neighbouring cultures) and why it was taken up so promptly by poets and artists.

He said a contributing factor could be the obstacles society placed in the way of contact between younger males and females of similar social positions, directing the male's sexual energies towards either slave prostitutes or homosexuality.

Also, he suggested that the absence of any one deity with the "power" to regulate behaviour could have had an effect.

Sir Kenneth Dover is best known for his work on Thucydides and Aristophanes and has published a book on Lysias and editions of Theocritus and Plato's "Symposium".

Most recently he has published books on "Greek Popular Morality in the Time of Plato and Aristophanes" and "Greek Homosexuality".

His current world tour has included the US, Canada, Japan and China as well as Australia.



● The Rev. Dr. J. Davis McCaughey (second from right) with the Vice-Chancellor Professor Ray Martin and (from left) the Roman Catholic Chaplain, Father Laurence Foote O.P. and Protestant chaplain, the Rev. Derek Evans.

'Universities should encourage criticism' — Rev. Dr. McCaughey

While universities are in the business of transforming minds they are not in the business of conditioning them.

Reverend Dr J. Davis McCaughey said this while delivering the address at a service in the Religious Centre to mark the start of the academic year. Dr. McCaughey recently retired as Master of Ormond College in the University of Melbourne.

He examined the application to universities of Paul's words: "Do not be conformed to this world but be transformed by the renewing of your mind, that you may prove what is the will of God, what is good and acceptable and perfect."

Dr McCaughey said of universities:

"We are not here to process students. We are not promoters of an ideology.

"We are here to give young men and women, and nowadays some not so young, and ourselves who are old, opportunities to stand back and look: to make critical judgements, to examine and to accept what seems to be the appropriate judgement on the matter in hand.

"Contrary to the popular view, it is extraordinary the amount of emotion that can be engendered in the university, it is surprising how emotions cloud judgement, and envy, jealousy and personal likes and dislikes are only thinly concealed under sophisticated arguments.

"The university is all too like the world around it: it needs men and women who are being transformed by the renewing of their minds, and that means men and women of independent, critical judgement, unpurchasable."

Tradition

He continued: "If it is the job of the university to encourage men and women to be critical and independently minded, it is also our job to remind each other that the human race was not born yesterday. We are the inheritors of a great tradition. Behind us the discoveries, the accomplishments as well as the failures and blemishes of the past.

"If we turn out lawyers who know nothing of the history of law, of the struggle for law to be placed above power and privilege, we only have ourselves to blame if the practice of the law becomes no more than the pathway to wealth and position in society, and redress at the hands of the law becomes available only to the rich.

"Similarly, if the great tradition of what is good and acceptable and perfect in the history of medical science and practice is not conveyed to our medical students we have only ourselves to blame if the health of the community is sacrificed to the convenience of doctors."

April Diary

The events listed below are open to the public. 'RBH' throughout stands for Robert Blackwood Hall. There is a BASS ticketing outlet on campus at the Alexander Theatre.

6-16: EXHIBITION — "Fred Williams Bass Strait Landscapes 1971-1978", pres. by department of Visual Arts. Monday to Friday 10 a.m. - 5 p.m., Wednesdays 11 a.m.-6 p.m. Exhibition Gallery, Menzies Building. Admission free. Inquiries: ext. 2117.

7: ENVIRONMENTAL FORUMS — "Bicycle Planning in Australia", by Alan Parker. 14: "Integrated Landscape Analysis", by Donald Holgram. 21: "From Phuket to the Golden Triangle", by Tim Ealey. 28: "Non-Technical Barriers to Energy Conservation" by David Crossley. Pres. by Graduate School of Environmental Science. All forums at 5 p.m. Environmental Science Seminar Room. Admission free. Inquiries: exts. 3837, 3840.

15: ABORIGINAL STUDIES LECTURES — "Bush Foods of Victoria", by Dr Beth Gott. 22: Racism — An Aboriginal Experience". 29: "The Nature and Function of Racism", by Lorna Lippmann. All lectures at 1 p.m. Lecture Theatre R6. Admission free. Inquiries: ext. 3335.

LECTURE — "Social Policy in the 1980s", by Dr Adam Graycar, Director,

Social Welfare Research Centre, University of NSW. Pres. by department of Social Work. 4.30 p.m. Room SGO1/2, Menzies Building. Admission free. Inquiries: ext. 2989.

16: MATHEMATICS LECTURES — "Mathematical Paradoxes", by Prof. G. B. Preston. 30: "Stonehenge and Ancient Egypt — The Mathematics of Radiocarbon Dating", by Dr R. M. Clark. Both lectures at 7 p.m. Lecture Theatre R1. Admission free. Inquiries: ext. 2607.

16-17: MUSICAL — "Robert and Elizabeth", musical based on the Barretts of Wimpole Street, presented by Cheltenham Light Opera Company. Performances also April 22-24, and April 28-May 1. Nightly at 8 p.m. (Special Sunday matinee April 18 at 2 p.m.). Alex. Theatre. Admission: Adults \$6.50; pensioners & tertiary students \$4.50; children \$3.50. Bookings: 555 3269.

17: SATURDAY CLUB (Red Series, 5-8 year-olds) "Paradiddle" — folk music. 2.30 p.m. Alex. Theatre. Admission: adults \$4.50, children \$3.50. Red Series subscriptions still available.

18: CONCERT — Schools Music Festival presented by the City of Waverley. Featuring choirs, groups and instrumentalists from Brentwood High,

Mt Waverley High, Monash High, Mazenod College, Glen Waverley High, Wheelers Hill High, Avila College and Highvale High, with guests John and Mary Kopke. RBH. 2 p.m. Admission free.

19: LUNCHTIME CONCERT — Jazz concert. RBH. 1.15 p.m. Admission free. UPDATE '82 Business training sessions — Marketing, Your Japanese Business Partner, Basic Importing. Pres. by Centre for Continuing Education. Further information: exts. 3707, 3718.

MIGRANT STUDIES SEMINAR — "The Greengrocer's Daughter", by Glen Tomasetti. 7.30 p.m. Lecture Theatre R3. Admission free. Inquiries: ext. 2825.

24: SATURDAY CLUB (Red Series, 5-8 year-olds) "Things That Go Bump in the Night" presented by the Bouverie Street Theatre-in-Education team. 2.30 p.m. Alex. Theatre. Admission: adults \$4.50, children \$3.50.

26: LUNCHTIME CONCERT — Jazz concert. RBH. 1.15 p.m. Admission free.

28: MONASH PARENTS GROUP — Fashion parade of Scottish Belle Knitwear, compered by Margaret Hendrie, followed by a luncheon. 10.30 p.m. RBH. Admission: \$3.50 Further information: 850 2315.

Women's cricket triumph!

● From front page.

Miss Cameron also pays high tribute to her girls' fighting spirit — and the way they produced their best performances in the final series. The figures tell the story:
In the semi-finals . . .

● A grade all-rounder **Gwen Rowe** scored 82, then took 4/33, while **Margaret Blackmore** contributed 76, and **Lynne O'Brien** 40.

● In C grade, **Ann-Mary Kiefel** scored 87, and **Chris Lowe** took 6/14 off 12 overs, with five maidens. Then in the grand finals . . .

● **Kim Holmes** scored 175 and **Bronwyn Jones** 69, while **Margaret**

Blackmore scored 32, then went on to take 4/34.

● Captain-wicketkeeper **Amanda Griffin** had a hand in five dismissals. **C Grade:**

● Star bowler **Lynne O'Brien** took 12 wickets for the match, at a cost of 97. ● **Chris Lowe** scored a personal best of 121, made 24 n.o. in the second innings — and took six wickets for the match.

Grand Final results:

A Grade: Monash 8/432 dec. (Holmes 175, Jones 69, Blackmore 32) def. Doncaster 260 (Blackmore 4/34, **Robyn Bray** 3/78, Jones 2/79).

C Grade: Monash 232 (Lowe 121, Cheryl White 26 n.o.) and 0/66 (Lowe 24 n.o., Kiefel 22 n.o.) def. Brighton Union 96 (O'Brien 5/20, Lowe 4/29) and 200 (O'Brien 7/77).

RIGHT: Star batswoman **Kim Holmes**, who made 175 for Monash A, gets some bowling tips from coach **Lola Cameron**.

LEFT: All-rounder, **Chris Lowe**, made 121 and 24 n.o. and took six wickets for the match in the C Grade final.



● Members of the victorious Monash teams sharpen their catching skills with coach **Lola Cameron**.



This was Prof. Board's big pitched battle

In addition to **CLASS** so evident on page one, the recent Professorial Board cricket match (see **Sound 4-82** for details) had . . . well . . . everything:



And the rowers show strength also

Monash University Women's Rowing Club has also — in a manner of speaking — been riding a wave of success. Together with the cricket club, it has been attracting unprecedented support — and notching up an unprecedented sequence of wins. This month sees the end of the 1981-82 rowing season, and hopes are high for further glory at the University Women's Regatta on the Yarra on April 19.

Monash Reporter for May will bring you the results — together with a special report on the state of the sport from **MUWRC** President, **Margaret Swan**.

Photos by Rick Crompton

Monash's slashing season on the field

OOMP!

Professor **Marie Neale** (Education) showed unexpected aggression in despatching this loose ball to the off. Her Dean, **Professor Peter Fensham**, is behind the stumps.



STYLE!

Professor **Owen Potter** (Chemical Engineering), the principal organiser of the match, here sends a fast return in from the outfield.

MONASH REPORTER

The next will be published in first week of May, 1982.

Copy deadline is Monday, April 26.

Contributions (letters, articles, photos) and suggestions should be addressed to the editor (ext. 2003) c/- the information office, ground floor, University Offices.



DRAMA!

The Vice-Chancellor, **Professor Ray Martin**, retired unbeaten soon after this stroke — but returned later to act as runner when his partner, **Professor Graeme Schofield**, Dean of Medicine, pulled a muscle.