

# Banksias: A gift fit for a Queen



(Photo: 'Canberra Times')

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

Here, Mrs Rosser discusses some of the illustrations with the Queen and the Duke of Edinburgh.

Also at the ceremony were Alex George, Executive Editor of 'Flora of Australia', the taxonomist responsible for the scientific text accompanying Celia's paintings, and the Vice-Chancellor of Monash, Professor Martin, and Mrs Martin.

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

"The Banksias" was published by Academic Press (London) in association with Monash University to coincide with the XIII International Botanical Congress held in Australia late last year.

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

Meanwhile, YOU can enjoy some of Celia Rosser's artistic genius — with the new set of "all-occasion" cards just produced by the University. These cost only 40c each — and you can read about them on page 2.

## Keeping in touch

We hope we're welcome! As has happened for the last few years, this last issue of Reporter for the year is being mailed to all Monash graduates in a bid to keep them informed of University activities. In the centre you'll find a four-page Year in Review supplement. And elsewhere there's news on —

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## MONASH REPORTER

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Graduates' issue:  
'82 Review feature

## Pet plants with a lethal bite

They display the plant kingdom's most unusual evolutionary adaptation — one which, in a way, blurs the distinction between that and the animal kingdom.

At least that's been food for wayward thought by science-fiction writers.

In recent years they have become enormously popular as indoor "pet" plants.

With a sharp decline in the social acceptability of feeding Christians to the lions, some might even say that insectivorous plants are the perfect trifle for the new predatory age.

The "deviousness" of the capture strategies employed by such plants would fill the Marquis de Sade with envy.

Monash botanists Dr Neil Hallam, a senior lecturer, and David Parkes, an M.Sc. graduate, have studied these strategies using the scanning electron microscope housed in the Botany department.

They have also studied the cytochemistry of insectivorous plants — that is, the biochemical processes involved in their digestion of insects such as flies, mosquitoes and midges.

The researchers have come to understand how cells in the plants produce

enzymes which break down the bodies and extract from them the nutrients required. They have also gained an insight on how these enzymes are packaged and released in such a way that plant cells themselves are not damaged.

### Little research

Despite the curiosity value of insectivorous plants not a great deal of research has been done on them and for much of this century a text by Charles Darwin has remained the definitive work.

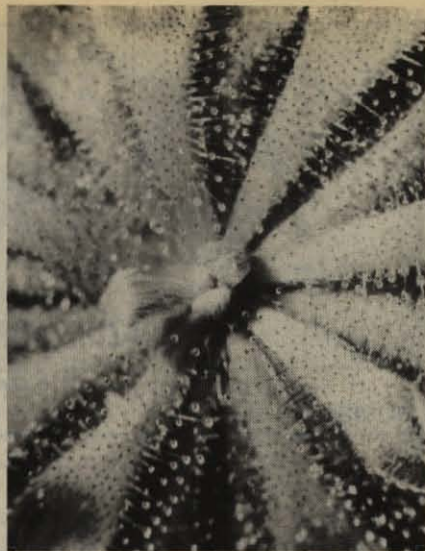
Such plants are found worldwide (several species grow in Australia, one endemic) in soils which are low in nitrogen and phosphates. Dr Hallam says that the plants have evolved in response to these conditions: the nutrients lacking in the soil have been extracted from the bodies of insects — the nitrogen from amino acids and phosphates from the breakdown of tissue.

There are two main types of traps employed by different species of insectivorous plants, one with a more "active" mechanism than the other.

● The thumb-sized *Cephalotus* (below) is found only in the Albany region of Western Australia. Others in this species of pitcher plant grow to between 30cm and 60cm in height.

Continued overleaf





The leaves of *Drosera* (left) have hair-like tentacles that produce drops of shiny liquid (seen in close-up above) which are fatally attractive to insects.

## 'Fan-vaulted ceiling' has deadly purpose

Continued from page 1

More opportunistic than "active" are the "pitcher" plants which have static traps, embedded nevertheless with obstacles to prevent the prey's escape. The behaviour of the second type more closely resembles that of animals—parts of the plant move when stimulated by the insect so that it actually "holds" its prey to ensure entrapment.

The pitcher plants, in common, attract insects to the trap (a pitcher-shaped part of the plant, hence the name) by producing "bait" — alluring liquids and smells — from glands at its lip.

The nature of the obstacle within the pitcher, to prevent the prey escaping once it has been lured, varies among the species. The principle, however, is the same: in repeated encounters with the obstacle the insect becomes exhausted and finally falls to the floor of the pitcher which is lined with cells which produce digesting fluid.

In this group there is, for example, *Nepenthes* which is found south from the Malaysian peninsula to Cape York. The inside walls of this plant's pitcher are lined with plates of wax. Once the insect has been enticed inside, its foot pads become blocked with wax. The more it struggles the more clogged the pads become. Finally the insect falls into

the "vat" where the digesting fluid completes its work in about a week, leaving nothing but the exo-skeleton.

(There is a species of spider "one up" on *Nepenthes*. It leads a daredevil life by nimbly spinning a web just inside the mouth of the pitcher and parasitically using the plant's alluring strategy to attract its prey.)

In *Sarracenia*, the pitcher's design is akin to a fan-vaulted ceiling. Once inside the receptacle the insect faces the rather horrific prospect of negotiating a bed of downward pointing spikes. This plant is found in Central America.

Also found in this region is *Darlingtonia* or the cobra plant so named because of the trapping mechanism's remarkable similarity in appearance to the cobra, tongue protruding, poised to strike.

### Deceptive 'skylight'

The "tongue" is the lure, leading the insect up into the "head" of the plant. This head is dotted with "skylights" where the plant wall is thinner, admitting light. The insect attempts to fly off, vertically, in the direction of the light source. The plant wall thwarts its attempts. Eventually the insect falls into the adjoining tubular section of the plant to be digested.

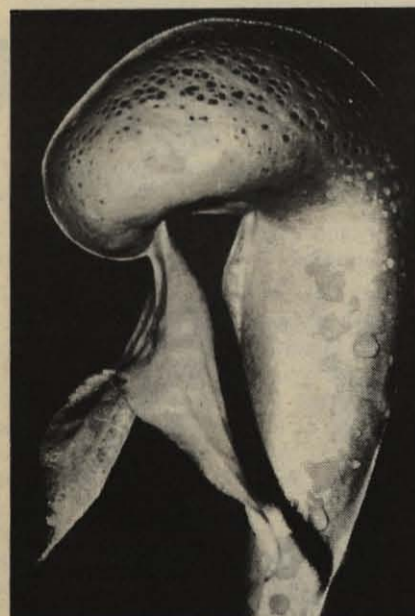
There is one pitcher plant with a narrowly localised distribution. It is *Cephalotus* which is found only around Albany in Western Australia. Whereas other pitcher plants grow, on average, to a height of from one to two feet, *Cephalotus* is a thumb-sized plant.

*Drosera* is often a rosette-shaped plant with a central flower stalk found world-wide. It adopts a more active strategy of entrapment.

Its leaves are covered with hair-like tentacles. Red-coloured cells at the end of these tentacles produce drops of shiny liquid attractive to insects. In German this digesting liquid is termed fangschleim, so onomatopoeic that English-speaking botanists seem not to bother with a translation.

When an insect contacts a tentacle, surrounding tentacles undergo rapid movement in direction of the prey. They throw on to it globules of fangschleim.

The other major strategy is the active snap trap, employed by *Dionaea*, a plant more commonly known as the Venus fly



The central American *Darlingtonia* is commonly known as the cobra plant — for reasons that are strikingly obvious in this photo.

## Special card offer



The Information Office has released a set of "all-occasion" cards featuring some of Celia Rosser's Banksia paintings.

At present, three species are available: *Banksia aemula* (shown here), *Banksia occidentalis*, and *Banksia serrata*.

All have been beautifully printed in full color on matt Alabaster Ivory board, and measure approx. 155mm x 115mm. The illustrations were taken from Volume 1 of Celia Rosser and Alex George's "The Banksias", and reproduced from transparencies supplied by 'Your Garden' magazine.

The cards bear no inscription (other than an identifying caption), but are ideal for Christmas — as for any other occasion.

They cost (with envelope) only 40 cents each, and may be ordered through the Information Office, or bought over-the-counter at the Inquiry Desk, ground floor, University Offices.



The pitcher-shaped receptacle of the central American *Sarracenia* has stalactite-like spikes set in a pattern resembling a fan-vaulted ceiling.

trap. It is a native of Central America and the south of the U.S.

The clam-shaped plant has sensitive hairs which line the middle of its "man-trap" like leaf. When these are triggered the trap snaps shut in less than a second. Two or more hairs have to be stimulated before the trap operates, ensuring that it is an insect walking through that is captured and not an object such as a twig which can fall in by chance.

There are also species of aquatic plants which feed on small living organisms. Among them is *Utricularia* or the "lobster pot" plant.

## SPOTLIGHT ON ESPERANTO

Next year is the Year of International Communication.

Some believe that the teaching of Esperanto, the "international language", is the quickest, easiest and most democratic way of removing the barrier between people imposed by language differences.

An exhibition highlighting the history and aims of Esperanto opens in the Monash Main Library this month and will remain on show until January.

MONASH REPORTER

# 'New deal' proposals for the handicapped

The Victorian Government is about to receive reform proposals on guardianship for intellectually handicapped people which, if enacted, should rank this State's provisions among the best in the world.

Preparing an initial discussion paper and subsequent draft legislation on the issue has been the task of a Working Party set up by the Minister for Health. Chaired by Dr Errol Cocks, that body has had among its members Dr Terry Carney, senior lecturer in Law at Monash.

In an article in the latest issue of the *Monash University Law Review* and in an interview with *Monash Reporter*, Dr Carney has discussed guardianship — where certain powers and responsibilities normally entrusted to the citizen as an inherent right of adulthood are transferred to another party to be exer-

cised on his behalf — and the philosophy behind reform of existing laws.

"Guardianship," Dr Carney says, "remains one of the very few legal relationships capable of being reformed and transformed into an institution serving as a vehicle for the recognition and protection of the human rights of intellectually handicapped people."

A "guiding light" behind reform is the 1971 United Nations Declaration of the Rights of Mentally Retarded Persons. This Declaration opens with the assertion that "the mentally retarded person has, to the maximum degree of feasibility, the same rights as other human beings."

It goes on:

"The mentally retarded person has a right to a qualified guardian when this is required to protect his personal well-being and interests (and) . . . a right to protection from exploitation, abuse and degrading treatment."

The emphasis of specific entitlements for the intellectually handicapped put forward by the UN is on their social and civil rights to participate to the maximum degree in the ordinary community. It embodies the concept of "normalisation."

## Starting point

In seeking to secure those (currently neglected) rights in Victoria the reform proposals adopt as their starting point two associated principles — that of "the least restrictive alternative" and "the presumption of competence".

The least restrictive alternative aims to ensure that the intellectually handicapped are accorded maximum autonomy of action and control over their own affairs. Dr Carney says it is a "bulwark" against well-meaning but over-protective legislation or the tendency to assume general incompetence from evidence of incapacity in a narrow area of personal decision.

This is at the heart of the reform: breaking the link between guardianship and general incompetency. The fact of guardianship should not in itself automatically affect civil rights such as the right to vote, drive a car or enter a contract, or indeed the range of life decisions such as place of residence, participation in social activities, and aspects of diet, dress and the like.

"The presumption of competence serves to protect each and every element of the bundle of normal life decisions from being unnecessarily taken out of the control of the individual by virtue of a guardianship order," says Dr Carney.

"These twin principles dictate that guardianship orders should be 'tailor-made' to the individual assets and liabilities of the person concerned. In short, that guardianship be parsimonious, flexible and individual."

The reform proposals introduce the concept of partial guardianship as a step towards achieving these aims.

Victorian law as it stands falls well short of satisfying UN standards, according to Dr Carney.

## Three alternatives

There are three ways by which guardianship may be extended under existing law:

- Any person below the age of 18 is under the guardianship of his parents. If this guardianship cannot be discharged the child may be admitted as a ward of the State.

- A person may designate power of attorney so that another person is authorised to exercise specific powers over his affairs. There is, however, a hurdle to the intellectually handicapped adult appointing his own attorney/guardian: the person transferring powers is obliged to have sufficient understanding of their nature and effect as a demonstration of his legal capacity to delegate.

- Guardianship may be extended under the provisions of the Public Trustee Act and associated provisions of the Mental Health Act.

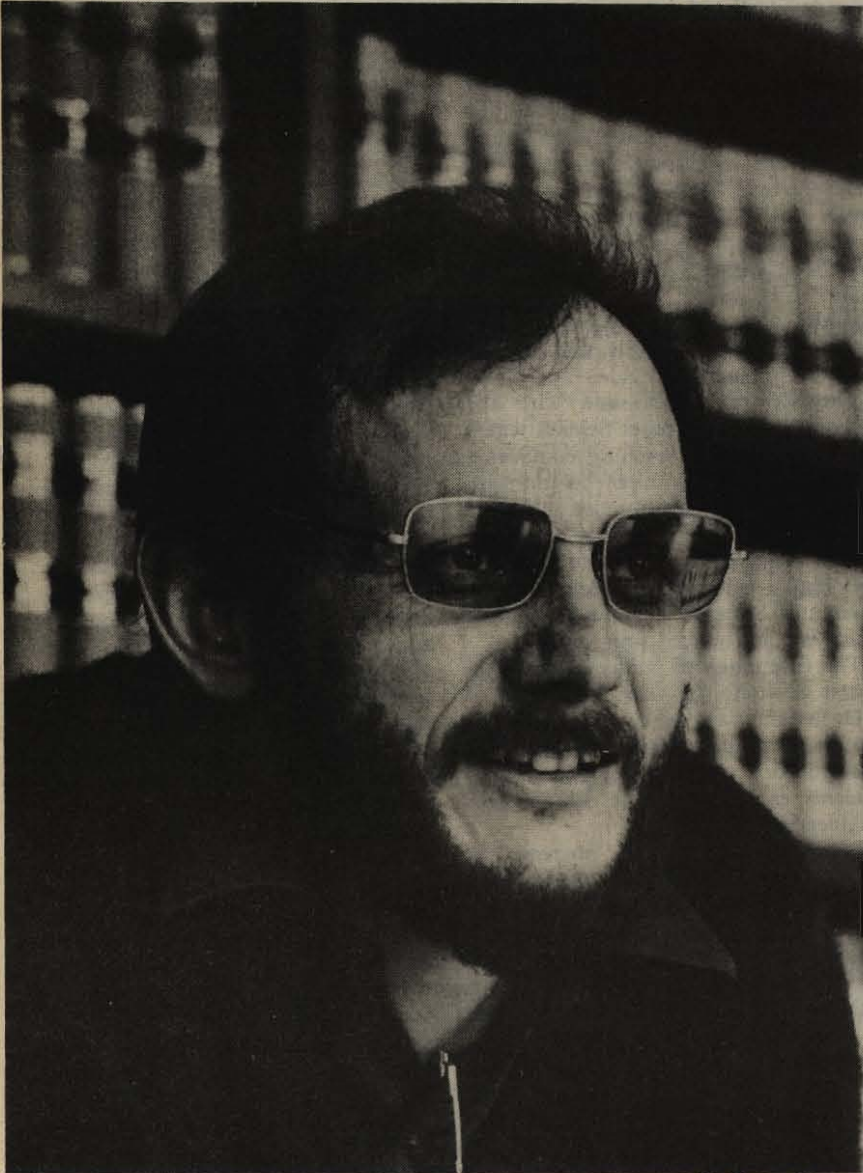
Dr Carney says that a major deficiency in these last provisions lies in their concentration on property and financial matters, to the neglect of social and civil rights.

"This bias may have been appropriate to the social conditions of the 19th century but it is something of an anachronism in this day and age. Few handicapped persons have any fortunes," he says.

A second set of defects can be described as structural weaknesses or barriers to access to the existing law.

The terminology employed in the present guardianship procedure creates stigma for the retarded person in need of help and pain for the parents seeking to ensure he will get it. The procedures are cumbersome, there are inadequate pro-

Continued overleaf



● Dr Terry Carney

## Dust off those treasures

Want to know whether that vase gathering dust in the spare room cupboard is really as valuable as Aunt Jemimah fondly believed?

For \$2 you'll be able to find out — at Monash's first "Antique Assessment Day", to be held at Chadstone Shopping Centre on Friday, November 26.

The "Day" has been organised by the Monash Advisory Committee, a small group convened by Mrs Rena Martin, the Vice-Chancellor's wife, to act as advisers and co-ordinators for special projects not covered by University funding.

The proceeds from this enterprise will go to the Monash Art Fund.

Mrs Martin (pictured at right with committee member Mrs Margaret Endersbee) says that experts in a number of fields will be available at the Chadstone Community Centre between 11 a.m. and 3 p.m. to give on-the-spot assessments of family treasures.

Among them will be representatives of: Leonard Joel (Auctioneers), Classic Gems Pty. Ltd., Joshua McClelland Antiques, Yately Galleries, Kenneth Hince (old and fine books), and Mrs June Stringer, president of the Australian Lacemakers' Association.

Monash Arts and Crafts Centre will also be represented by members displaying their talents in painting, pottery, stained-glass windowmaking, silver-smithing, weaving and other pursuits. Tea and coffee will be served.

Mrs Martin stresses that assessments (limited to 10 per person), will be given NOT for insurance purposes, but rather for personal information.





Female students scooped the prize pool in the 1982 Goethe Poetry Competition for secondary school students of German which was organised this year by Monash's German department.

Last month the Consul-General in Melbourne of the Federal Republic of Germany, Dr Karl-Heinz Scholtyssek, presented prizes and certificates to the 20 place-getters (including only one male) and some 50 other finalists in a ceremony in Robert Blackwood Hall.

The competition is sponsored by the German Consulate, the Goethe Society, the Goethe Institute and the German departments of Monash and Melbourne universities. These departments take it in turns to organise the event.

The first prize winners were: Year 10, Fiona Peacock (St Leonard's College); Year 11, Annabella Johnson (Presbyterian Ladies College); and Year 12, Janet Watson (Penleigh and Essendon Grammar School).

• Our picture shows Janet Watson receiving her prize from Dr Scholtyssek. In the background are Mrs Gisela Tlemann-Kaplan and Professor Leslie Bodi of the department of German. (Photo: Rick Crompton).

## Big cuts in energy

The University's Energy Conservation Committee is more than just a body with a pious hope in its heart.

The Committee's work is paying dividends by making a dent on Monash's huge energy bill.

Take, for instance, recommended modifications to plant in the Main Library.

Early in 1981 work started on modernising controls to give more efficient use of the compressors which provide heating and cooling. New filters were installed to provide better air movement. At appropriate times, outside air is introduced.

The work cost \$24,600. Only 18 months later the modifications had paid for themselves in savings on the electricity bill. It has been straight saving since August.

A second "sitting duck" for savings

has been areas of the campus that are brightly lit for longer than is strictly necessary.

The Committee's "weapon" in this campaign has been a detecting device akin to those which open doors when people approach.

In this application they monitor movement or the lack of it in, say, lecture theatres or library areas. When all is still for a number of minutes the device triggers the "off" switch on lights. The movement of someone entering the area automatically triggers the "on" switch.

The testing ground for the "silent watchers" was in the Biomedical Library.

Now four of the detectors have been installed to give comprehensive coverage of the large games hall in the Sports and Recreation Centre.

# Computer Centre to spread its 'net'

The Monash Computer Centre has developed a computer network system which permits access to any computer on campus from one terminal.

The network system is the result of five years of research and development and will eventually link several hundred terminals on campus and at the teaching hospitals to the University's computers.

The Centre's Director, Dr Cliff Bellamy, says the system is at present being installed and has about 100 terminals connected to it.

The network system is the work of a team which includes Dr Bellamy, Mr Barry Treloar, Mr Neil Clarke, Mr Keith Heale and Mr Patrick Miller.

Research represents only a part of the Computer Centre's activities. One of its main roles is to provide computer facilities and consultative services for staff and students. It is also heavily involved in teaching.

The Centre collaborated with the department of Computer Science which provides specialist teaching computing for students. A similar relationship exists with the department of Electrical Engineering, the Computer Centre's staff teaching a number of subjects for the highly successful Electrical and Computer Systems Engineering course which was introduced four years ago.

The first batch of students from this course graduate this year.

Dr Bellamy says the Computer Centre teaches computer programming at an introductory level to about 1000 students each year in the Science and Engineering Faculties.

But with the dramatic increase in recent years in the number of students using computers as part of their course, he says, the total number of students requiring access to computers in any one year is now of the order of 3080. The main growth area in future is expected to be in accounting and other areas of "commercial" computing.

"This dramatic increase in the number of students has led us to a pretty

substantial investment for equipment," Dr Bellamy says. "We now have a dual processor B6700 computer, seven VAX computers, 12 MONECS computers and a range of printers and graph plotting devices. There is also a VAX computer run by Computer Sciences and another by Electrical Engineering.

"The facilities for students and the standard of teaching at Monash is thought to be as good as any in Australia.

"The equipment has cost more than \$3 million, and there are more than 600 computer terminals housed in different parts of the University. Students have access to about 300 of them."

The network system which the Computer Centre has developed and is now installing has been designed to meet the University's particular needs. But Dr Bellamy believes that it is an economic solution to the computer needs of many other organisations also.

The network system is basically a shared communication system which runs around the University. Information is transmitted at the relatively high speed of 1½ million bits of information per second along a single cable, which contains two pairs of wires.

The information from various users is intermixed as it flows into the system and is unscrambled at the other end by a complicated device which directs the information into the appropriate computer.

The network system has been designed to minimise the cost of cabling and to allocate channels in a controlled manner. A good deal of expertise also has gone into providing facilities for controlling access to the different computers, so that it is not possible to "jam" the system as it is with normal telephone data transmission.

## New deal for handicapped?

Continued from page 3.

visions for legal representation and review, and there is no mechanism for "tailor made" orders. Guardianship under the Public Trustee Act is an "all or nothing" state which is ameliorated only to some degree by the administrative practice.

Personal guardianship provisions relating to the person as distinct from his or her property in Victoria are, Dr Carney concludes, "a dead letter."

What often happens now in practice is that parents of intellectually handicapped people continue to exercise guardianship over them after they turn 18. But it is a *de facto* relationship that has no foundation in law.

This accepted practice raises the question of the sensitivity with which reform to the law must be handled, says Dr Carney.

"Many aged parents view it as their inalienable right to be able to continue to exercise *de jure* the absolute powers of guardianship and control which they have assumed in respect of their adult intellectually handicapped 'children'.

"The majority could — and should — become wise and sensitive holders of partial guardianship powers under new legislation. But they must be attracted to, and won over by, an administration which they will be tempted to characterise as bureaucratic meddling with matters properly the preserve of the family unit.

"It is imperative that they be won over, for the dangers of any *carte blanche* or unsupervised guardianship are well documented. It would be immoral for the State to wash its hands of this matter and allow the civil rights of intellectually handicapped adults to be suppressed by well-meaning, over-protective parents.

"What is required, daunting though the prescription appears, is a law which will win that support and confidence."

In making recommendations on such a law the Working Party has been able to consider a substantial body of legislation enacted in several North American and Australian States. It has also been able to assess the shortcomings

of some of that legislation.

Dr Carney says that the essence of the scheme being proposed for Victoria can be drawn from elements of legislation existing in Alberta (Canada) and South Australia.

In devising institutions and procedures for determining guardianship which are widely accessible, yet fair and accurate in their decisions, the Working Party's discussion paper prefers low-key "coffee table" justice to judicial forms of decision-making.

Preference has also been expressed for guardianship legislation which eschews labels and offers its services to everyone — whether aged, accident victim or the intellectually handicapped.

As with the Alberta Act (but unlike that in South Australia), Dr. Carney proposes that provision should be made for guardianship to be delegated to members of the community who would be approved by a body with adjudicative powers. The South Australian style of adjudication by an administrative body or tribunal is preferred to Alberta's

reliance on a superior court.

Recommendations on the type of guardianship orders endorse Alberta practice. They should be individually tailored and preferably partial.

The innovative features in the Victorian discussion paper lie mainly in the area of the distribution of powers among the guardian, the person for whom he is responsible and the bodies to whom he is accountable.

Dr Carney says that the Working Party has taken a rather "jaundiced view" of the South Australian procedure of entrusting to the administrative body alone questions of sterilisation, abortion and tissue donation.

The Victorian paper also advances improvements which should ensure that guardians would be less likely to acquire powers over matters related to the values and lifestyle of the person affected, would receive orders which were rather more specific and detailed than their overseas counterparts, and would be encouraged to act more in the role of advocates for their charges.

# Monash International

## Monash aids Indonesian University

Monash staff members are playing a major role in a project to relocate and upgrade facilities at an Indonesian university.

The institution is Universitas Hasanuddin (UNHAS), located in Ujung Pandang, Sulawesi.

The relocation, the \$US44.5m. cost of which is being funded by the Asian Development Bank, is receiving technical assistance from the Australian Universities International Development Program.

Construction started in January. As well as new buildings, the project involves an upgrading of equipment and improvement of the skills of staff.

Professor Colin Johnston (medicine) and Dr Terry Hore (teaching methodology). In addition, a University of Melbourne team is advising on agriculture and one from the University of New South Wales on the library system.

The teaching methodology team — Dr Hore, Mr Ian Thomas, Mr Neil Paget and Mr Ted Snell, all of the Higher Education Advisory and Research Unit — spent three weeks at UNHAS recently conducting an intensive workshop on topics requested by the University's staff.

### Workshop topics

The workshop was built around six topics: planning for instruction; assessment of student performance; large group teaching; audio-visual media; evaluation of teaching; and program review and evaluation.

Dr Hore says that the final part of the workshop consisted of a personal project which provided an opportunity for participants to complete a unit of work which could be written in Indonesian and used in their teaching.

He says that the principles of contract learning were used: participants



• (From left to right): Dr Jan Luhulima (Universitas Hasanuddin), Dr Terry Hore (Monash), Mr Ted Snell (Monash), Ms Hasyah Haneng (Universitas Hasanuddin), Mr Gunanto (Universitas Hasanuddin), Mr Neil Paget (Monash), Mrs Soetiarti Hartono (Universitas Hasanuddin) and Mr Ian Thomas (Monash).

specified what project they would undertake and signed a contract with the team agreeing to complete the requirements by a certain date.

Dr Hore says: "This method proved popular and successful in getting partici-

pants to work both in the workshop and in their own time on their project. The projects varied from an analysis of prerequisites to detailed lecture preparation, multiple choice test item writing and test analysis."

### Current project

Monash has had a long involvement in assistance to Indonesian universities pioneered by Professor Bill Rachinger, of Physics, and Associate Professor Arthur Williams, of Mechanical Engineering.

In the current project, tender documents for new equipment are being prepared by three Monash teams headed by Professor Rachinger (advising in the area of science and technology),

## Chinese scientists visit Monash



Leading members of China's top scientific body, Academia Sinica, who were in Melbourne last month for the opening of the Chinese dinosaur exhibition at the National Museum, visited Monash to check on progress of a project involving Chinese and Monash vertebrate paleontologists.

Chinese scientists have been working with Dr Pat Rich, of Earth Sciences, and Mr Ron Savage, of the Japanese Department, on a computer-based system for the automatic translation of Chinese paleontological literature into English (and vice versa) and the production of the first Chinese-English/English-Chinese dictionary in the subject.

Pictured above (from left to right) are Professor Minchen Chow, a visiting researcher in the Earth Sciences Department, Mr Ron Savage, Dr Ting Hao, Bureau Director of Academia Sinica and Mrs Yu-Ping Zhang, a visiting researcher in the Earth Sciences Department.

## Monash host to Japanese editor



• Associate Professor Harold Bolitho (left) and Mr Kensaku Shirai, foreign editor of the Tokyo daily, *Asahi Shimbun*. Photo: Tony Miller.

Coverage of Australian affairs in the Japanese press could improve following the visit last month of Mr Kensaku Shirai, foreign editor of *Asahi Shimbun*, a Tokyo daily with (at seven million copies) the second largest circulation in Japan.

Mr Shirai was attempting to get a "feel" for Australia during his visit and met with politicians, business leaders, fellow journalists and academics. He visited the Japanese department at Monash for talks with Associate Professor Harold Bolitho.

One of the stereotypical notions that the Japanese hold about Australia, says Mr Shirai, is that the country still pursues a "whites only" policy.

"I find that that is far from the case," he says, "and am impressed with the way in which this country has shaped a multicultural society."

Mr Shirai has served as correspondent for *Asahi Shimbun*, which publishes editions around the clock, in London, Washington and the Middle East.

# Most medical graduates aim to work in general practice

## Computer scientists have few problems

In conjunction with the Australian Graduate Careers Council's annual survey of graduate destinations, the Monash Careers and Appointments Service undertook a survey of Monash medical students who graduated in 1981.

The aim of the survey was to obtain a profile of medical graduates and ascertain their long-term goals with a view to conducting a further survey in about five years' time.

Sixty-three male graduates and 31 female graduates responded to the questionnaire — a response rate of 70 per cent.

The respondents to the survey were young compared with the general university population, taking into account that their ages were taken at the end of a six-year course.

Twenty one per cent were under 24, 44 per cent were aged 24, 33 per cent were aged 25-29 and two per cent were aged 30 and over.

All graduates who responded except two expected to be practising medicine in five years' time. Sixty three per cent hoped to enter general practice. Twelve per cent hoped to become surgeons and 10 per cent hoped to become physicians.

Among other specialties, sports medicine attracted 30 per cent of males but no females. Paediatrics, obstetrics and gynaecology were preferred by

females. Anaesthetics, psychiatry, neurology and the Flying Doctor Service attracted male aspirants.

Amongst those not expecting to stay in medicine, one expected to be unemployed and another to enter another profession.

The Careers and Appointments Service says in its survey report that the prospect of accommodating family demands was mentioned by only one graduate, who expected to work part-time in general practice while raising a family.

"This seemed a small number considering that most of the respondents will be aged about 30, five years after graduating," the survey says.

A survey by the Monash University Careers and Appointments Service indicates that the 1981 stream of Monash science graduates with major studies in computer science had no difficulties in gaining employment.

The survey was conducted concurrently with the annual survey by the Graduate Careers Council of Australia of the destinations of all students who graduated from tertiary institutions in the previous year.

Sixty-three science graduates with major studies in computer science were surveyed in the Monash study. The response sample was 45.

The survey found that 34 of these 45 graduates took up employment on completion of their degrees. In all but one case the job was directly associated with computing. The odd one out took a job as a laboratory technician.

Twelve graduates took jobs with computer suppliers and consultants, four with large manufacturing organisations, two in banking, two in insurance, eight in the public sector, two with oil companies and three with other finance organisations.

The average salary was \$15,000 with a range of \$10,000 to \$19,000.

The survey says the success of Monash graduates in gaining employment is best evidenced by the fact that one of the world's largest computer manufacturers employed five of them.

"The attractiveness of the graduates to employers is not in doubt," the study says. "What is perhaps of more interest is that the graduates themselves tend to be conservative in their identification of potential employers. The employers to whom the graduates applied were generally the larger, more obvious, organisations."

Of particular interest in the survey, the report says, was the high proportion of graduates who included physics, chemistry, and at least one branch of mathematics at HSC level.

As to the perceived benefits of the course, most graduates tended to view it instrumentally, the report says. It got them a job. There were few comments in their replies regarding the benefits of tertiary study in general.

The report comments: "This instrumental view is reflected in the feeling of most students that the course was not practical enough or commercially oriented — perhaps in later years after some 'incubation' the overall benefits of tertiary study will become more apparent, particularly with computer science graduates, for those who move into areas involving more scientific applications."

## City meeting place for graduates

The University Club at 100 Collins St, Melbourne, reminds graduates that it is open for light luncheons between noon and 2.30 pm each weekday.

Also there are 'happy hours' from 5-7.30 pm, Monday to Wednesday, and from 5 till midnight and beyond Thursday-Saturday. Bookings are still being accepted for Christmas functions. Inquiries about reservations, or membership, should be directed to Margaret Sloss on 63 1607.



The Student Employment Office this month is posting out 6000 brochures seeking summer jobs for Monash students.

The targets are "labor-intensive" industries, such as food, beverage, paint and plastics manufacturers, retail stores, petrol stations, hotels, construction companies, hospitals and municipal councils.

The brochure lists a wide range of areas that Monash students could work in.

These include: clerical, laboring, gardening, hotel and restaurant, data processing, storework, factory, technical, engineering, accounting, domestic, driving, sales, childminding, tutoring, fruit picking . . .

. . . and many other jobs, including interpreting and translating in 35 foreign languages.

According to Student Employment Officer, Irmgard Good, summer vacation employment has, for most students at Monash and other universities, become a necessity. The current grants and allowances have sadly not kept pace with rising inflation and the escalating cost of living.

Many students, she says, have found it necessary to borrow money during the

academic year, and they often need to repay these loans before the beginning of the next year. Other students need to find vacation employment in order to finance their studies in the following year.

For Engineering students it is an essential requirement to gain 12 weeks of course-related work before they are eligible to take out their degree.

It is generally accepted that a single student living away from home would require about \$80-\$90 a week (in fact, the equivalent of the Henderson poverty line figure for a single person, living away from home, is \$98.64 per week).

"Given the current state of the economy, not all students seeking vacation employment will find it through the Employment Office," says Irmgard. "Certainly it is one way, but students should be prepared to use their own initiative by approaching personally or by letter as many employers as possible within their own suburbs or country town. Friends, neighbors and acquaintances can also be helpful in finding suitable employment."

Irmgard, and her assistant Robyn Best and student helper Karen McGeachen, are gearing up for the

• Our picture shows, from left, Robyn Best, Irmgard Good and Karen McGeachen, unleashing the mail barrage.

November surge of students seeking employment. An all-hours answering service will assist employers in phoning through their vacancies at any time.

Irmgard's advice to students is: "It is best to find work as soon as exams finish rather than take a well-earned rest. Many businesses, hopefully, will increase production before Christmas but close down in January. Therefore, finding work in the new year will be more difficult."

"Cherry and strawberry picking will begin in mid-November in the Wandin, Lilydale areas and vacancies have already been notified. Apricot and peach picking will begin in the Shepparton area from early December (depending on the weather) and students should inquire at the Employment Office in December.

"It has become imperative this year for students not to wait for the perfect job, but to accept anything that is offered."

The Student Employment Office is located on the first floor of the Union Building and can be contacted on 541 0811, ext. 3097 or 3297. This service is free to employer and student.

# Where do consultants fit in?

The role of personnel consultants and private employment agencies in student employment is questioned in a paper which Mr Lionel H. Parrott, officer-in-charge of the Monash Careers and Appointments Service will deliver this month.

Mr Parrott will present the paper at the National Conference of Careers Advisers' Services at Bowral in NSW.

"Whatever position careers and appointments services adopt towards personnel consultants either collectively or singly," he says, "it must not be either a reflection of professional petulance, or based upon notions that personnel consultants, because they offer

'professional' services, possess greater expertise."

He adds: "We should take into account that the prime objective of personnel consultants is the pursuit of profit, and that difficult operating conditions for them bring the visibility of any ethical standards they aspire to into doubt, and will lead to increasing attention being given to new agencies or business.

"Whereas our objectives might be to render simple and straightforward the process of getting a job," he says, "personnel consultants stand to gain by surrounding this process with mystery."

Mr Parrott, who reviewed the ac-

tivities of private personnel consultants, warns that any deterioration in the professional performance of university careers services makes them vulnerable.

"The areas of our general activities are extremely attractive for their profit potential," he says, referring to the private personnel consultants.

"In essence, our attitude must be determined by what is best for our students," he says. "Have we any right to refuse assistance to a student simply because a job is being handled by a personnel consultant?" he asks.

He adds: "Despite the personal feelings many of us may have about the services provided by consultants, and the prices charged for them, our objectives have surely always been to encourage students to make career decisions for themselves and to accept responsibility for them. To use a personnel consultant is their decision rather than ours."

Mr Parrott quotes Isabel McKinney, secretary to the University of Sydney Board, who commented at a 1960 conference of Australian University Appointments Boards: "We require the name of the employer to be given with each job submitted by a consultant."

That seems to be a common practice with careers and appointments services, Mr Parrott says.

He says the role of university careers and appointments service has been described as that of an "honest broker".

"As far as personnel consultants are concerned, this might be extended so that we ensure there is 'fair dealing' between them and our clients," he says.

## Calling all physiologists

Former Physiology students — where are you?

The department of Physiology intends surveying its former students (starting with those who took Physiology 303 in 1978 or 1979) to determine what type of work or further training they are now undertaking.

If you were among this group the department would appreciate hearing from you. Contact the **Chairman, Department of Physiology (Survey), Monash University, Clayton. 3168.** Don't forget to include your current address.

## Your 4-year calendar

You can throw away your crystal ball. Professorial Board has approved the following term dates for the next FOUR YEARS!

### 1983

First term, March 7 — May 14; 2nd, June 6 — August 13; 3rd, September 5 — October 22. Exams start on October 28.

### 1984

First term, March 5 — May 12; 2nd,

June 4 — August 11; 3rd, September 3 — October 20. Exams start October 26.

### 1985

First term, March 4 — May 11; 2nd, June 3 — August 10; 3rd, September 2 — October 19. Exams start October 25.

### 1986

First term, March 3 — May 10; 2nd, June 2 — August 9; 3rd, September 1 — October 18. Exams start October 24.

# The socialist world's 'winds of change'

AN INTERNATIONAL group of economists recently sought the assistance of computers in an effort to unravel some of the major problems of socialist economies in Eastern Europe.

Asked why there was an almost perennial meat shortage in Poland, the Polish computer hesitated for a moment and then replied: "Do not understand the word 'meat'."

To the same question, the American computer responded: "Do not understand the term 'shortage'."

The economists then fed the problem to the Soviet computer which, after taking a while to digest it, replied: "Do not understand the word 'why'."

This report from the mythical Radio Armenia, the source of so many Soviet anecdotes, highlights some of the issues examined by Ron Breth and Ian Ward in their new study of the economies of what, in the days before the Moscow-Peking dispute and the emergence of polycentrism, was once known as the Communist bloc. As the replies of the two Soviet bloc computers suggest, two of the principal characteristics of the self-styled socialist societies are economic backwardness on the one hand and authoritarian political systems on the other. In all probability, the combination of these two forces is, as Communist Party parlance would have it, no accident.

It is one of Marxian socialism's greatest misfortunes that the economically more advanced Western societies which Marx and Engels considered to possess — or to be capable of developing — the economic and cultural prerequisites of socialism have failed to fulfil the historic mission which those founding fathers conferred upon them. To those attracted by the socialist ideal, it is perhaps an even greater cause for regret that the Marxian banner, largely ignored by the bread-and-circus-seeking majority of the Western working class, should have been picked up by men (only very occasionally by women) who, seeking power in largely peasant societies, had concluded that the only way to displace the authoritarian ancien regimes was to employ authoritarian methods of their own.

Once installed in power, such people found that Marx and Engels had little practical guidance to offer them. Nor could they look to Lenin for much assistance: his *State and Revolution* (1917), with its vision

Ron Breth and Ian Ward: **Socialism: the Options**, [Melbourne: Hargreen Publishing Company, 1982]. pp. viii & 182. No price given.

### Review by IAN CUMMINS, Senior Lecturer in History

of the withering away of the state upon the ultimate attainment of Communism, was of little immediate use to beleaguered economic planners and managers seeking to keep the fragile Soviet ship of state afloat in the turbulent seas of growing working class and peasant discontent as well as a fratricidal civil war in the years immediately after 1917.

With many of Marx and Engels' expectations misplaced and Lenin having largely to improvise, it was not until Stalin's rise to power that it became possible to devise and impose an ambitious and full scale model of economic organisation and development upon the now more stable USSR. It is this Stalinist model, with its highly centralised decision-making machinery as well as its inefficiencies and social inequities, that looms large in Ron Breth and Ian Ward's book.

Ranging as it does over the economies of sixteen countries occupying approximately one-third of the earth's surface and accounting for almost 40% of its population, their study is an ambitious one. Its very scope, indeed, more or less makes their early treatment of the concepts of an economic system, capitalism, socialism and communism almost unavoidably general.

Yet even here, and to a much greater extent in their later chapters, they succeed in establishing clear distinction between the various systems discussed.

The various modifications of, and more outspoken departures from, the original Stalinist prototype are examined in much fuller detail in subsequent chapters dealing with such problems as the morale of and incentives offered to, the work force; notions of workers' control and management of economic enterprises; the forms of property obtaining and the amount of latitude given to private ownership (especially in small-scale agriculture), and other issues.

In terms of levels of economic development, Breth and Ward's book ranges from poor agricultural societies such as those of Cuba and Laos to such

industrialised ones as the German Democratic Republic and Czechoslovakia. A useful appendix setting out models of selected socialist economic systems outlines the Stalinist, Maoist and Castro-Guevarist models together with the more 'revisionist' ones associated with such figures as Tito and Ota Sik, the economist who left his native Czechoslovakia after the suppression of Dubcek's Prague Spring in 1968.

Not even the Communist superpowers have been able to resist the winds of change: Breth and Ward describe the more flexible Kosygin-Liberman model which replaced the essentially Stalinist one which survived de-Stalinisation and, in a political sense, Khrushchev himself, until 1965. The modification of the Stalinist economic apparatus in the USSR has its parallel in China in the dismantling of some of the economic structure which owed its inspiration to Mao Tse-tung and its replacement by a less centralised and somewhat more market-oriented system promoted by the late Liu Shaoqi and the current Vice-Premier Deng Xiaoping.

Ron Breth and Ian Ward confine their attention to those forms of socialism which claim inspiration from Marx and Lenin. They do not consider such schools of socialist thought as Utopianism, Fabianism or Western Social Democracy, whose theoreticians might, in certain instances, dispute the applicability of the term 'socialist' to some of the regimes discussed in this book. Stalinism was after all marked not only by political oppression and social inequality but also by economic inefficiency, a point whose recognition by various reformers in Eastern Europe as well as in the Soviet Union itself has contributed to the development of some of the systems examined by Breth and Ward. While some of the latter seek to avoid the undesirable aspects of the original Stalinist model, they have not always succeeded in escaping some of the ills, such as inflation and unemployment, which plague Western economies at present.

While Breth and Ward's account of the various Marxist-Leninist regimes today is fair-minded and wide-ranging, it is not a particularly encouraging one, in terms either of economic efficiency or human solidarity. Meanwhile if the Czechs these days are hardly bouncing, General Jaruzelski and Lech Walesa remain Poles apart.

# Confronting the 'Brave New World' . . . 550 years early

In 1980, Monash University established Australia's first Centre for Human Bioethics. Its purpose was to define and research the daunting challenges — legal, moral and social — thrown up by the revolutionary scientific advances of the latter half of the 20th century. Here, **Dr Cora Singer**, a research officer of the Centre, reviews some of its achievements to date, and looks at some of its current and future activities . . .

In 1932 Aldous Huxley wrote *Brave New World*, a book that deals with the advancement of science affecting human individuals and their quality of life. It was a great success because its prophecies looked as if they could conceivably come true.

Huxley projected these developments 600 years in the future, but in his foreword to the 1950 edition he thought it could happen in one century. Nobody expected biological sciences to progress in 60 years to a stage where we talk about test tube babies, IVF and surrogate mothers in our daily life.

The "biological revolution", which had seemed science fiction, started in the '60s with organ transplants, pre-natal diagnosis, the possibility of controlling behaviour by direct electrical impulses to the brain, and genetic engineering.

In 1969 the Hastings Centre, or to give it its more formal title, The Institute of Society, Ethics and The Life Sciences, was founded in Hastings-on-Hudson, near New York, to discuss the ethical problems caused by these rapid advances in biological, medical, and behavioural sciences; only an interdisciplinary effort by law, science, medicine, philosophy, history, social science, and theology can decide on issues created by the technical advances.

## Science doesn't have all the answers

The pace of recent scientific development in the medical and biological sciences has far outstripped our ability to achieve consensus on the proper use of our knowledge. Many of the implications of medical research affect the quality of our lives and will affect the lives of future generations; answers to these problems have to be found. As **Professor Kluckhohn**, the eminent anthropologist, recognised: "science provides only a car and a chauffeur for us; it cannot, as science, tell us where to drive".

The first Australian bioethics centre was founded in 1980 — the Monash Centre for Human Bioethics. The broad aims of the Centre are:

- To carry out research on issues in human bioethics and to promote study of the ethical, social and legal problems arising out of medical biological research.
- To provide an advisory and resource centre for government, professional, educational, and community groups.
- To stimulate the development of educational programs in human bioethics for professionals and the public.

The Centre for Human Bioethics has held two conferences, the first, "Medical Science and the Preservation of Life: Ethical and Legal Dilemmas" was held at Mannix College in November last year. Speakers were **Dr. Erica Bates**, from the University of New South Wales, **Professor D. B. Allbrook**,

University of Western Australia, **Professor Peter Singer**, Monash University and **Mr. Justice Kirby**, Chairman of the Law Reform Commission of Australia.

The second conference, "In-Vitro Fertilisation: Problems and Possibilities", was held at the Australasian College of Surgeons on March 11 this year. **Professor Carl Wood** described the process of IVF and embryo transfer (E.T.); **Mr and Mrs Brennan** pleaded for IVF to continue (supported by the cries of test tube daughter Pippin). Other speakers included **Dr Alan Trounson** (Queen Victoria Medical Centre), who said freezing and preservation of human embryos was essential to the current high success rate of the IVF-ET procedure; **Mrs Helga Kuhse** (Monash Centre for Human Bioethics), who discussed ethical questions arising from the procedure, and **Mr. Alan Rassaby**, legal questions. **Dr. J. Santamaria** (St. Vincent's Hospital) warned that IVF and ET and the possibilities of "genetic engineering" threaten the basic structure of society.

Tapes and Proceedings of the Conference are available for sale. The Centre for Human Bioethics has also up-to-date bibliographies on IVF and on Acts/Omissions — Killing/Letting Die, which are available on request.

The Centre also arranged lectures with overseas professors with the assistance of a grant from the Myer Foundation. **Professor George Annas**, Associate Professor of Law and Medicine at Boston University, gave lectures at the Royal Society of Victoria on August 26 and 27.

## Perplexing issues of defective infants

In his first talk Professor Annas addressed the perplexing issues surrounding the birth of a seriously defective baby. He discussed five recent cases, in England and the United States, in which the courts have had to decide whether to order treatment, against the wishes of the parents, to sustain the life of the child. In all but one of these cases, the court had ruled that where there was a treatment available that can help the child, you must use that treatment, irrespective of its mental or physical defects.

Professor Annas suggested, however, that courts were not the ideal place for these decisions to be taken, and that the challenge is to work out some principles by which we can separate the broad kind of case that should be treated from the broad kind of case that should not be treated.

His second talk was directed to issues raised by new methods of reproduction: AID, Surrogate Motherhood, and IVF. He discussed the problems of children wishing to know the identity of their genetic parents, and of commerce in human reproductive material or, conversely, of a woman hiring herself out as an incubator for someone else's embryo.



One of the more intriguing events of the Bioethics Centre's year was the visit in August of His Holiness, the Dalai Lama, for a seminar in the University Offices. The seminar focused on three burning issues of the 1980s — *in vitro* fertilisation, the rights of defective newborn children, and euthanasia. Papers on each of these topics were presented by acknowledged authorities in their fields . . . respectively, **Professor Carl Wood** (Monash), **Dr Bernard Neal** (Royal Children's Hospital) and **Professor Peter Singer** (Monash). Our picture shows the Deputy Vice-Chancellor, **Professor Kevin Westfold**, introducing the Dalai Lama to the Dean of Medicine, **Professor Graeme Schofield**.

Such contracts were not, he said, enforceable at law in the United States, and would presumably not be in Australia either.

On IVF, Professor Annas said he could see few problems in the straightforward situation where the genetic material came from the couple involved, but, in the future, surrogate motherhood and embryo donations and freezing would all raise issues needing careful examination.

The Monash Centre for Human Bioethics is currently working on two major research programs, one concerning the treatment of severely defective babies and the other on IVF and its implications.

Thanks also to the Myer Foundation the Centre is now arranging for **Professor Clifford Grobstein** to visit Melbourne for two weeks; he is Professor of Biological Science and Public Policy at the University of California in San Diego.

Professor Grobstein will give two public lectures at the Royal Society of Victoria: "In-Vitro Fertilisation: The Present Climate," on November 29 at 5p.m., and "In-Vitro Fertilisation: Implications for the Future", on December 6, also at 5p.m.

He will also be a guest speaker at a seminar on "Ethical Issues in Health Promotion" at Lincoln Institute, Carlton, on November 30 at 2.15p.m. Other speakers will include **Dr. Bill Hart** from Lincoln Institute, and **Dr. Nigel Gray**, Director of the Anti-Cancer Council of Victoria.

Private meetings with interested groups are also being arranged.

A book, *Test Tube Babies: A Guide to Moral Questions, Present Techniques and Future Possibilities*, edited by two members of the committee of the Centre for Human Bioethics, **Associate Professor W. A. Walters** and **Professor P. Singer**, has just been published by Oxford University Press.

The Centre is building an Association of interested members of the community, both inside and outside the University. The Centre produces a newsletter which is circulated to all Associates, to keep them up-to-date with the work of the Centre as well as general news about the field of human bioethics. Associates receive notification of all lectures, seminars and other activities organised by the Centre and have access to resources such as bibliographies and reports.

We believe that a Centre devoted to the study of pressing moral and ethical problems raised by the medical and biological sciences is vitally needed if we are to use our new knowledge wisely.

University funds were provided to establish the Centre. However, its growth and development depend on other regular sources of income from the wider community. We welcome donations, and invite those interested in making larger gifts or bequests to contact us for further information.

All donations to the Centre are allowable deductions for income tax purposes, and bequests are not subject to Probate and Federal Estate duties.

Turn to page 11 for an application form for associate membership of the Monash Centre for Human Bioethics.



# Computer design increases productivity

The computer is revolutionising the design and manufacture of components in the aircraft, automobile and other industries.

In Monash's Mechanical Engineering department, Dr Sarath Gunasekera, a senior lecturer, has pioneered teaching and research in computer aided design and manufacturing (CAD/CAM) in recent years.

Dr Gunasekera returned in June from an outside studies program conducted at the US Air Force Materials Laboratory at Wright-Patterson Air Force Base in Dayton, Ohio. There he worked on the CAD/CAM of dies for the production of wing parts from a new aluminium alloy which holds the promise of lighter, more fuel efficient aircraft.

He will be returning to Wright-Patterson, one of the US's largest air bases, during the long vacation for final testing of the dies he designed.

CAD/CAM, says Dr Gunasekera, has the potential to boost Australia's competitiveness in manufacturing. Currently we are at a handicap in this field. Innovation in components, based on conventional design methods, is labour intensive and, at Australian wage rates, expensive.

## Analytical modelling

The process of trial and error plays a large part in conventional design. The computer holds the key to the elimination of much of this time-consuming procedure, says Dr Gunasekera. Analytical modelling takes place in the computer: the engineer gets optimum results in the conceptual stage, long before the first die is produced.

Dr Gunasekera says that the computer cannot provide all the answers on the design of a component to the finest detail. But it does allow the engineer to converge on a much smaller area where

trial and error testing of design options will be necessary. Computer graphics help the designer to understand and visualise complex three-dimensional geometrics of components and dies.

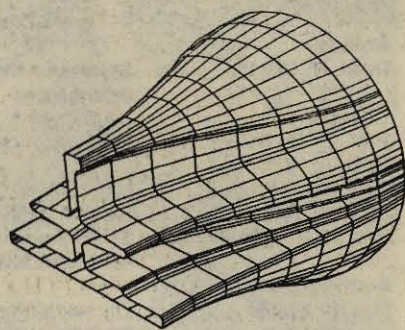
The benefits are increased productivity and a reduced lead time in the production of components.

Dr Gunasekera says that the lead time (the time from concept to production) of, say, aircraft landing gear is, on average, two years. CAD/CAM has the ability to reduce that to six months.

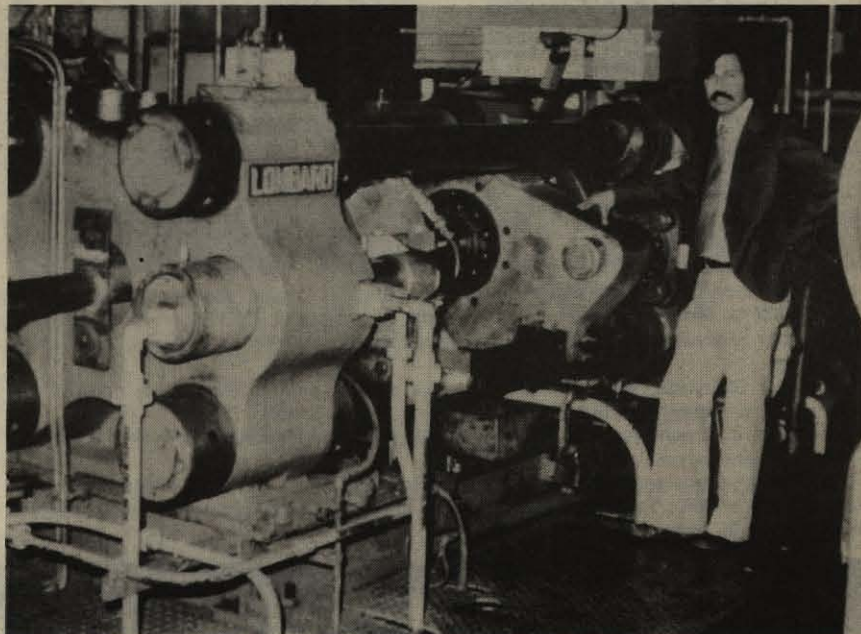
Dr Gunasekera was invited to join the US Air Force Materials Laboratory's research program following his work at Monash on the analysis of non-axisymmetric extrusion and CAD/CAM of dies. This work has also involved Susumu Hoshino who came to Monash from the Defence Academy, Tokyo, in 1978 and this year gained his Ph.D.

At Dayton, Dr Gunasekera worked on the design of a complex extrusion die for a wing spar cap.

This part is to be made from a new aluminium alloy (Al. 2024 with 20% SiC whiskers) developed by Exxon. The material has twice the stiffness of conventional aluminium alloy, a quality which enables the design of long, slender wings with less drag and reduced weight. The result is a more fuel-efficient aircraft.



A perspective projection produced by a computer of an electrode used to electro discharge machine a die for a complex aircraft structural part.



Dr Sarath Gunasekera examines the experimental extrusion rig at the Wright-Patterson Air Force Base in Dayton, Ohio. The rig is used to check the validity of computer models.

The problem, however, has been to manufacture complex shapes of this material without breaking up the whiskers and thus ruining its superior mechanical properties.

In place of the conventional shear (or flat faced) die, Dr Gunasekera proposed use of streamlined dies for the extrusion of the material. He completed the design of the die and the procedure for its manufacture using the sophisticated CAD/CAM hardware and software at Dayton.

Dr Gunasekera returned from the US impressed with that country's approach to defence research and development.

The US Defence Department, unlike its Australian or British counterparts, contracts out most R&D work. The government scientists act more as project managers, directing and monitoring the work.

He says: "The US system is more effective because the bulk of the work is carried out by outside firms on a very highly competitive basis away from the usual government red tape and bureaucracy."

While defence research is being well funded, Dr Gunasekera found "severe hardship" in US universities in general.

Dr Gunasekera is Sri Lankan born. He took his Ph.D from Imperial College, University of London, and has worked at Monash since 1977. He has also acted as consultant to many firms and bodies, including BHP, Pilkington-ACI and the MMBW, in recent years.

Currently he is supervising another Ph.D. student, Ho Siaw, an experimental officer with the newly established CSIRO Division of Manufacturing Technology. He is investigating CAD/CAM's application in the pressure die casting industry.

# Understanding the disabled

This symposium was held in response to a suggestion in 1980 that the Monash University Vice-Chancellor's Advisory Committee for People with Handicaps (VCACPH) should in some way mark the UN's Declaration of 1981 as the International Year of Disabled Persons.

In this unusually informative and perceptive report, Ms. Shores, as its convener, and her collaborator, Miss S. Shaw, have described in some detail the aspirations, organisation and results of this symposium. Originally intended to be a three-day event with its theme on "Hidden disabilities", it finally became a one-day symposium on "Access, attitudes and awareness: full participation and equality of disabled people at Monash". The two organisers rightly decided to confine its scope to the Monash scene.

In the morning, a number of disabled and non-disabled speakers from the Monash campus and elsewhere presented papers to the audience of over 100 persons, one quarter of whom were academic or administrative staff on the campus. The texts of the various speakers are reproduced in full; some of the papers given by disabled staff and students provide excellent and, at times, poignant descriptions of the problems

SHORES, P. Access, attitudes and awareness: full participation and equality of disabled people at Monash. Report of a symposium on the above theme, held on Friday, 22 May, 1981, in the Cellar Room, Monash University Union. Vice-Chancellor's Advisory Committee for People with Handicaps, Monash University, Melbourne: 1982. (50pp. and appendices) \$2 per copy, with \$1 extra for postage.

they faced while working at Monash.

One of the most significant papers in the whole report came from Associate Professor McCredie, himself blinded and hearing-impaired, and twice Sub-Dean in the Faculty of Law at Monash. He presented a revealing account of the complex and sometimes agonising problems he encountered while determining what special facilities, if any, should be granted to disabled students during their examinations. This kind of information, so seldom reported in print, would be of great significance to other persons who may also be involved in the conduct of examinations for disabled persons.

After lunch, the audience was broken up into several groups and involved in experimental learning exercises whereby the members were given an opportunity firstly to examine some of their own attitudes towards disability, and towards

disabled people, and secondly to increase their own personal awareness of some of the needs of disabled people, and some of the disabilities experienced by them.

About a quarter of the audience completed the special questionnaire distributed at the end of the day. The feedback thus obtained indicated that the majority of the respondents had gained greatly by participating in this symposium. Many expressed the hope that this symposium would be repeated for the special benefit of staff members at regular intervals, perhaps each two or three years, both at Monash and elsewhere.

Individuals and organisations involved in any way with disabled persons, not only in tertiary or post-secondary educational institutions but also in secondary schools, would gain considerable insight

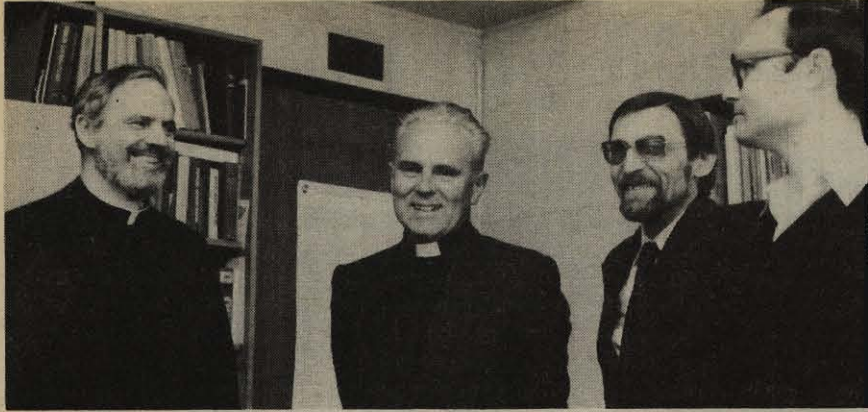


• Dr Pierre Gorman

by reading this report. In addition, the report contains many practical hints which would facilitate the successful organisation of comparable symposiums, either in Australia or overseas.

Dr Pierre Gorman  
Associate of the Education Faculty,  
Monash University.

NOVEMBER 1982



Monash's department of Slavic Languages (formerly the Russian department) last month hosted a visit by Monsignor Jaroslav Skarvada, a member of the Vatican Secretariat. Monsignor Skarvada, Czech-born, was in Australia to meet with members of the Czech community. Monsignor Skarvada has not seen his native country since 1945. At the time of the Communist revolution he was a student at Chieti seminary, Italy. The Church in Czechoslovakia, he says, is small and embattled but vigorously pursues its beliefs, heartened by a Polish-born Pope. Pictured with Monsignor Skarvada (second from left) are Fr Peter Knowles, Master of Mannix College (left); Professor Jiri Marvan, Chairman of Slavic Languages; and Fr Laurence Foote, Roman Catholic Chaplain.

## Vapours "not a hazard"

An article appeared recently in an overseas publication in which it was stated that the vapours released by correcting fluids and their solvents could be injurious to the health of users.

Monash Safety Officer Alan Wilson says checks with Victorian health authorities have shown there is no local evidence of health problems arising from the use of these products.

The University Safety Committee has had tests done on fluids and solvents available from the Central Stationery Store.

And from these tests and following reference to authoritative sources of information, the Committee concludes that when the products are used sensibly and in accordance with the manu-

facturer's instructions, there should not be any injurious side-effects.

Mr Wilson says the following precautions should be observed during use:

- Read and follow the manufacturer's instructions.
- Use in a well ventilated area.
- Replace the cap on the bottle immediately after use.
- Avoid splashes or other eye contact with the fluids or solvents.
- Do not smoke while using the fluids or solvents.
- Some people may be particularly susceptible to the fluid or solvent vapours. These people should use the products sparingly or avoid using them altogether.

The products tested were Liquid Retype, Correctette, Tippex Correcting Fluid, Tippex Thinners and Liquid Paper.

Mr. Wilson says other similar products may have characteristics that differ from those that were tested.

# ARGC grants: New projects

Monash has been awarded \$1,614,924 in research funds from the Australian Research Grants Committee for 1983 — 8.35% of the total national payout.

Of the Monash allocation, \$551,676 goes to fund 43 new projects — a gratifying increase over the "new project" allocation of \$309,562 in 1982.

The new projects funded are listed below:

ARTS		SCIENCE	
<b>Anthropology &amp; Sociology</b>		<b>Physiology</b>	
Dr D. Ryan	Rural-urban interaction in Papua New Guinea 6,280	Dr L. Aitkin	Brain mechanisms and binaural hearing 15,710
<b>German</b>		Dr U. Proske	Mammalian muscle receptors: development reflex responses and central actions 16,000
Assoc. Prof. M. Clyne	Cross-cultural comparison of academic discourse 8,000	Dr M. Weiss	Biogenesis of adrenal steroids in possum ( <i>Trichosurus vulpecula</i> ) with specific reference to the "special" zone of the female 11,600
<b>History</b>		<b>SCIENCE</b>	
Dr J. D. Rickard	Australian leisure activities in 1938 3,000	<b>Botany</b>	
<b>Linguistics</b>		Dr M. N. Clayton	Studies on the reproductive biology of brown algae 13,848
Dr G. Mallinson	The Arumanian language of Northern Greece 3,380	<b>Chemistry</b>	
<b>Music</b>		Prof. R. D. Brown	Theoretical galacto-chemistry 12,800
Dr M. J. Kartomi	Sumatran music cultures 16,173	Dr B. A. W. Collier	
<b>ECONOMICS &amp; POLITICS</b>		Dr P. D. Godfrey	Molecular structures in electrically excited states 2,150
<b>Econometrics &amp; Operations Research</b>		Dr S. R. Wilson	Syntheses of biologically important molecules involving metal catalysis 9,000
Dr M. King	Specification error in econometric models 8,739	Prof W. R. Jackson	
Dr K. McLaren	Financial modelling in continuous time 7,200	<b>Earth Sciences</b>	
Dr M. Upcher		Prof. B. Hobbs	The use of high pressures to determine the rate controlling process in olivine plasticity 12,890
<b>Politics</b>		Dr P. V. Rich	Palaeocollagen and the phylogeny of the tetrapods 1,330
Dr A. Davidson	The creation of consensus in the modern state 4,232	Dr M. Rowley	
<b>ENGINEERING</b>		Dr T. H. Rich	
<b>Chemical Engineering</b>		<b>Genetics</b>	
Assoc. Prof. F. Lawson	Application of laser speckle photography to mineral processing investigations 11,890	Assoc. Prof. V. Krishnapillai	Molecular genetics of transfer of <i>pseudomonas aeruginosa</i> R plasmids 10,600
<b>Civil Engineering</b>		Dr McKechnie	Genetic variation in alcohol tolerance and alcohol dehydrogenase in a winery population of <i>Drosophila melanogaster</i> 17,250
Dr G. Rozvany	Optimization of structural layouts by analytical methods 20,292	Dr K. Lavery	
<b>Materials Engineering</b>		<b>Mathematics</b>	
Assoc. Prof. B.W. Cherry	The structural basis of polymer friction 11,500	Dr C. Ash	Recursive model theory 5,000
Dr G. H. Edward	Deformation mechanism mapping of polymers 22,182	Dr J. G. Kupka	Factorization of operators from Banach spaces into spaces of measurable functions 5,000
<b>Mechanical Engineering</b>		Dr J. Monaghan	Numerical simulation of star formation in the presence of rotation and magnetic fields 4,200
Dr. G. Leonart	Wave energy transfer mechanisms 16,275	<b>Physics</b>	
Dr D. R. Blackman		Dr R. Fleming	Thermally stimulated Conductivity/Luminescence studies of charge carrier trapping and transport in organic polymers 1,000
Assoc. Prof. J. B. Hinwood		Dr T. Hicks	Polarisation analysis of diffuse neutron scattering 28,725
Dr T. T. Nguyen	Kinematic properties of breaking waves 7,155	Dr J. R. Davis	Vibrational modes and lattice stability in solids 29,306
Assoc. Prof. J. B. Hinwood		Prof. T. F. Smith	Room temperature metal vapour lasers 17,251
<b>LAW</b>		Dr J. D. Cashion	
Mr A. Farran	Legal problems concerning Australia and the GATT 11,750	Dr T. R. Finlayson	
Prof. D. E. Allan		Dr R. Tobin	
Prof. R. Baxt		<b>Psychology</b>	
<b>MEDICINE</b>		Dr A. Bowling	Spatio-temporal interactions in human vision 6,635
<b>Anatomy</b>		Dr D. C. Bradley	Language processes in listening and reading 16,000
Dr M. B. Renfree	Pregnancy and parturition in the marsupial <i>Macropus eugenii</i> 23,216	Dr R. J. Wales	Hemisphere and intermodality interpretation and conflict in decision making and learning 16,000
Prof. R. V. Short		Dr J. Bradshaw	Behaviour genetic studies of naturally occurring populations of <i>Drosophila</i> 16,750
<b>Biochemistry</b>		Mr N. C. Nettleton	Auditory spatial coding in deep layers of cat superior colliculus 7,200
Dr S. Marzuki	Structure and function of mitochondrial membranes 45,167	Dr S. Crossley	Recall and recognition processes Neural systems in the primate involved in auditory and visual spatial localization: a 2-(14C) - deoxyglucose study 17,000
Prof. A. Linnane		Dr D. Irvine	
<b>Pathology &amp; Immunology</b>		Dr D. M. Thomson	
Dr H. Ward	Differentiation of chicken lymphocytes and reticular epithelial cells studied by monoclonal antibodies to cell membrane antigens 15,000	Dr W. Webster	

# Monash Reporter service page

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.

## SUMMER DIARY

**NOV. 3: SUMMER SCHOOL, 1982-83:** Brochures for forthcoming Summer School now available. Inquiries: Arts & Crafts Centre, ext. 3096. Enrolments open on November 8.

**EXHIBITION — "Directions Now":** The Mitchelton Print Exhibition 1982, featuring works by 14 contemporary printmakers. Open 10a.m. to 6p.m. weekdays in Exhibition Gallery, Menzies Building, until November 12. Inquiries: ext. 2117.

**SEMINAR — "Court appearance ... Court reports":** a seminar for clergy, medical practitioners, psychologists, social workers, teachers. 4-9.30p.m. Registration \$26.50. Inquiries: Centre for Continuing Education, ext. 3717, 3718.

**SEMINAR — Recent developments in Taxation — Series B: "Taxation implications of corporate takeovers".** Arr. by Taxation Institute of Australia and faculty of Law. Law Institute of Victoria, 470 Bourke St., 6-7p.m. Other seminars in series: "The taxation and company law implications of arrangements and amalgamations" (November 10), "Stamp duty implications and takeovers and schemes of arrangements" (November 17). Inquiries: 63 7036.

**3-6: MUSICAL — "No No Nanette",** presented by Cheltenham Light Opera Company. 8p.m. Alex. Theatre. Admission: adults \$7.50; students and pensioners \$5.50; children \$4. Bookings: 555 3269.

**8: SEMINAR — "Deadlock in your company: What can you salvage?"** Law Institute of Victoria, 4.30-9.30p.m. Registration \$90. Inquiries: Continuing Legal Education, ext. 3307.

**11: SEMINAR — "Practical off-shore taxation: Double tax and Australian domestic tax problems",** Law Institute of Victoria, 4.30-9.30p.m. Registration \$95. Inquiries: ext. 3307.

**MEDICINE FACULTY LECTURE — "The Syndromes of Aphasia",** by Dr Harold Goodglass, Boston University. 5p.m. Medical School Lecture Theatre, Alfred Hospital. Admission free. Inquiries: 520 2601.

**16: ARTS & CRAFTS — Intensive pottery course begins.** Inquiries: ext. 3096, 3180.

**26: ANTIQUE ASSESSMENT DAY —** Authorities on jewellery and antiques will give on-the-spot assessments of family treasures at Chadstone Community Centre, Chadstone Mall, between 11a.m.

and 3p.m. Proceeds in aid of Monash Art Fund. Inquiries: ext. 2002.

**CONCERT — Dawn Lois Dancing School** presents "Starlight Revue", tap and ballet dancing. 7.45p.m. RBH Information, tickets: 547 2027.

**28: CONCERT — Junior Music Academy** Annual Concert and Award Presentation, including works by Chopin, Rimsky-Korsakov, and J. S. Bach (featuring the Ahrend organ). 2p.m. RBH. Admission: adults \$5; concession \$2.50. Information, tickets: 560 1513.

**MUSICAL COMEDY —** Melbourne Musical Theatre presents concert performances of "Trial by Jury" and selections from musicals. 2.15 & 8.15p.m. Alex. Theatre. Admission: adults \$8.50; students and pensioners \$6.50. Bookings: 543 2828.

**29: PUBLIC LECTURE — "IVF: The present climate",** by Prof. Clifford Grobstein, Visiting Fellow in Centre for Human Bioethics. 5 p.m. Royal Society of Victoria. Inquiries: ext. 3266.

**30: SEMINAR — "Ethical issues in health promotion",** with Prof. Clifford Grobstein. 2.15 p.m. Lincoln Institute. Inquiries: ext. 3266.

**DEC. 3: SEMINAR — "Science and scientists in relation to public policy",** Prof. Clifford Grobstein. 4.15 p.m. \$2. Inquiries: ext. 3266.

**4: CONCERT — Family day of fine music** featuring performers from the Melbourne Youth Music Council. 4p.m. and 7.30p.m. RBH. Admission: adults \$4; students and pensioners \$2.

**6: PUBLIC LECTURE — "IVF: Implications for the future",** Prof. Clifford Grobstein. 5 p.m. Royal Society. Inquiries: ext. 3266.

**11: CONCERT — St Gregorius Dutch Male** Choir Christmas concert, featuring Lowanna Singers, Victorian Boys' Choir, Victorian State Youth Band, Tony Fenelon (organ), Peter Thomas (compere). 7.45p.m. RBH. Admission: adults \$6; concession \$3. Tickets — RBH or 762 1326.

**18: CONCERT — National Boys' Choir** Family Christmas Concert, presenting traditional and unusual carols, and a Christmas pageant. 8.15p.m. RBH Information and tickets: 861 5838.

**SCHOOL HOLIDAY SPECIAL: Pantomime "Wizard of Oz"** begins in January. Phone 543 2828 for details.

## SCHOLARSHIPS

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

### AIMLS Scholarship —

Open to graduates for research (full-time or part-time) in the field of medical laboratory science, including administration and data processing. Valued at \$3,000 and

tenable for one year in the first instance. Applications close on January 15, 1983.

**Royal Commission for the Exhibition of 1851: Science Research Scholarships. Rutherford Scholarships.**

Open to graduates in the physical and biological sciences, pure and applied, and in engineering. Tenable abroad. Valued at 3560 pounds p.a., plus allowances. Applications close at the Graduate Scholarships Office, February 18, 1983.

## Japan travel opportunity

### Graduate Student Exchange Scheme

Inquiries are invited from graduate students who would be interested in continuing their studies, for a time, at Rikkyo University, Tokyo.

Under the terms of an exchange agreement Monash and Rikkyo may nominate a limited number of graduate students to the other. Tuition fees will be waived for Monash students accepted by Rikkyo but the students will be responsible for all other expenses.

Rikkyo University has six faculties: Arts, Economics, Science, Law and Politics, Social Relations, and General Education.

Monash may nominate one graduate student annually for consideration for a Rikkyo University International Scholarship. The scholarship is tenable for one year and is in the amount of 130,000 yen per month, and a payment of 300,000 yen at the time of the awardee's arrival in Japan. At present \$A1 = 253 yen.

Information received from Rikkyo University indicates that a graduate division registration fee of 70,000 yen is charged, also a facilities fee of 40,000 yen (in Science 60,000 yen). The University has no residential facilities for male students but will help them find a room elsewhere.

Further enquiries may be made to the Registrar, with whom applications for 1983 close on November 12.

## Important dates

The Registrar advises the following important dates for students in November.

- 6: Third term ends for Master of Librarianship and Master of Engineering Science by coursework.
- 13: Third term ends for Medicine IV.
- 16: Final Examinations commence for Medicine IV.
- 17: Publication of results, Medicine VI.
- 19: Applications close for Dip.Ed.
- 22: Summer term commences — faculty of Law.
- 26: Applications close for B.Ed. summer term.
- 29: Publication of results, Science IV.

### MONASH REPORTER

This is the last issue of Monash Reporter for 1982.

The next will be published in the first week of March, 1983.

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

### THE ASSOCIATION OF THE MONASH CENTRE FOR HUMAN BIOETHICS APPLICATION FORM

All interested people and institutions are invited to become Associates. The minimum annual donation is \$25. (A special rate of a minimum of \$5 per annum applies to full-time students and pensioners). Institutional Associateship is a minimum of \$100 per annum. Donations for Associateship are tax deductible and fall due on 1 July each year. For further details contact the Centre.

Surname..... Given Names.....  
Title.....

Address.....

Postcode.....

Telephone : Business..... Home.....

Occupation.....

\* I wish to register as an Associate of the Monash Centre for Human Bioethics in the following category. (Please tick appropriate box).

Individual Associateship:

(i) Minimum donation of \$25 per annum

(ii) Minimum donation of \$5 per annum (pensioner and full-time student rate)

Institutional Associateship:

Minimum donation of \$100 per annum

\* I would like to participate in a research project and/or seminar on

\* I would like to know more about the funding of research into

(Please specify subject area of most interest to you)

\* I would like to be advised of suitable wording for the inclusion of the Centre as a beneficiary in my will

\* I enclose a cheque/money order for the sum of \$.....

Cheques should be made payable to: "Centre for Human Bioethics Appeal Fund". This form plus remittance should be forwarded to:

The Secretary,  
Centre for Human Bioethics,  
Monash University, Clayton, Victoria, 3168.  
Phone: (03) 541 0811, extension 3266.

# His aim is to keep languages alive

**Emeritus Professor Einar Haugen, a world authority on bilingualism, talks of the "ecology" of language.**

Just as there are endangered species of animals and plants so too are there languages at risk of disappearing from a community or, more drastically, from the world altogether (as is happening with several Australian Aboriginal languages), says Professor Haugen, of Harvard University, who visited Monash last month.

From an analytical approach to what keeps languages alive and what causes them to die, Professor Haugen has developed an interest in language planning and, in particular, the steps that need to be taken to defend the "small" languages against the "steamroller effect" of modern communications.

Extending his ecological metaphor, Professor Haugen says that the worth of doing this lies in the rich diversity it gives to the social landscape.

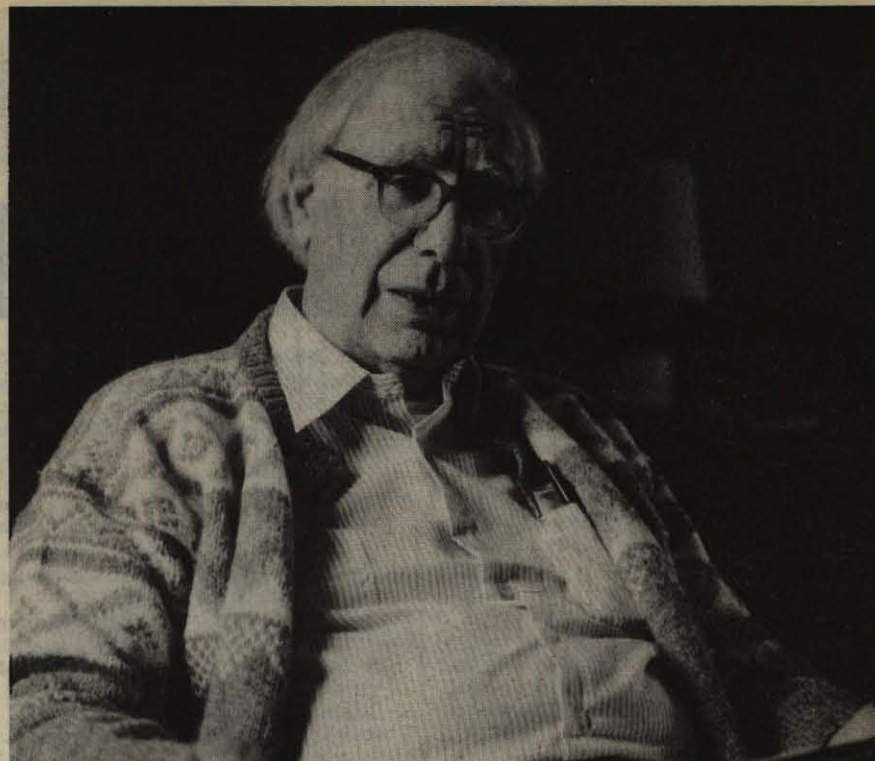
Professor Haugen, who has been president of the Linguistic Society of

America and the International Congress of Linguists among other bodies, was invited to Monash by Associate Professor Michael Clyne, of the German department.

He gave several public lectures here, including one on linguistic pluralism as a goal of national policy and another on personal reflections of growing up bilingually (he was born in the US, of Norwegian parents). He also participated in a workshop on language policy in Australia.

This is Professor Haugen's first visit to Australia and completes a globe-trotting year. From his home in Belmont, Massachusetts, he travelled to Norway in the northern Spring. He attended the 13th Congress of Linguists in Tokyo before coming on to Australia.

Professor Haugen's teaching and research have been in Scandinavian languages (particularly in Norwegian and Icelandic), general linguistics and social aspects of language. A comprehensive study he completed on the Norwegian language in North



Professor Einar Haugen, a linguist, of Harvard University, who visited Monash last month.

America has provided the framework within which other studies on bilingualism have been undertaken.

While in Canberra recently Professor Haugen was invited to put his views on bilingualism to the Senate Standing Committee on Education and the Arts which is inquiring into the need for a national language policy.

There are two issues that have to be considered in relation to this, he says. Needs and rights.

What the community has a responsibility to meet is the need of immigrants in a country such as Australia or the US to learn the dominant language, English. Bilingual programs in the US historically have been designed to meet this need. They have been part, then, of the policy of assimilation.

But what also has to be considered are the rights of members of an immigrant community to have the opportunity to maintain the language of their country of origin and, further, have it taught to their children.

Professor Haugen says that no one would deny immigrant communities the right to establish their own schools to do this. But a crucial issue that has to be

decided is what right these groups have to government support for their programs.

Professor Haugen personally supports the role of government in achieving bilingualism nationally.

He believes that the opportunity should be provided within every community for people to develop skills in a second language. The choice of that language he sees as being determined by the community.

Professor Haugen rules out any threat to a country such as Australia from the encouragement of bilingualism.

No one group is large enough to produce any sort of political danger, he says.

It's all a long way in outlook from periods of hysteria in relatively recent history.

Take the years of World War I for example. In the US, Professor Haugen says, speaking in a foreign language in a public place was illegal. It became equated with spying.

As in Australia, foreign terms or place names (especially German) were Anglicised: Sauerkraut overnight became liberty cabbage!

## Credit Union launches membership drive . . .



Monash Credit Union secretary-manager John Beach and assistant Marylin Yardin assist customer Gary Harris (left).

**Monash's Credit Union has launched a membership drive in an effort to consolidate the gains it has made in the past few months, and expand the services it offers its members.**

Now in its 12th year of operation, and with a membership of 2700, the Union (or more correctly, the Monash Campus Credit Co-Operative Ltd.) is seeking to enrol as many of the additional 15,000 potential members as possible by the end of March, 1983.

By that time, secretary-manager John Beach says, the Union will have wiped out the substantial deficit it incurred in the last year of trading and will be operating profitably.

Mr Beach, who has re-organised much of the Union's procedures since his appointment earlier this year, says that total savings funds now total \$2,500,000, and liquidity is more than double that required under the Co-Operation Act. Members' savings are guaranteed under the Act to a total of \$2 million.

Among the advantages now enjoyed by members, Mr Beach says, are:

- Speed and accuracy in over-the-

counter transactions processed by the newly-installed computer.

- Interest rates on both savings and loans set at levels that make the Union a viable alternative to other financial institutions.

- Free cheques.

- A capacity to virtually double the volume of business with no material interest in cost, thus ensuring enhanced profitability in the future.

The Union is currently negotiating with API (the Australian Post-Tel Institute) to enable members to join the API Trading Club, which offers substantial discounts on a wide range of goods.

It also plans to introduce a retirement investment scheme that would yield members a regular monthly income.

At the recent annual general meeting, Geoff Lacey (Biochemistry) was elected chairman. Vice-chairman is Jim Leicester (Deputy Registrar), and other directors are John Dowling (Law student), Terry Martin (Anatomy), Trevor May (Maintenance), Bill Murphy (Biochemistry) and Joan Sayers (Robert Blackwood Hall).

## ... a 'new' bank is born



On Sept. 30 CBA ceased to exist. The following morning a funeral oration was held to mark the bank's passing and the birth of Westpac. Monash Comptroller Len Candy (pictured above) was invited to cut the ribbon to mark the birth of the 'new' bank. (Left) Westpac manager Barry Fox.