

White tie, top hat and tap



All lined-up for the candied camera are members of the tap section of the Monash Modern Dance Group which is presenting a show, *Rock of Ages*, at the Alexander Theatre on September 6, 7, 8 and 9.

From left, the aspiring Gingers are Sue Holmes, Saw Paik Peng, Jane Bennett, Judie Pyke, Sharon Ruyters, and Sue Hilton.

Caught in the multi-exposure shot, left, are neo-classical dancers Meredith Taylor and Andrew Johnston.

"Rock of Ages" starts at 1 p.m. today, Wednesday and Friday and 2.15 p.m. on Thursday.

Admission costs \$1.50 (adults), \$1 (students) and 80c (members).

● PHOTOS: HERVE ALLEAUME.



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Detained— now top job



● Dr Weerasooria

A senior lecturer in law, Dr W. Weerasooria, has resigned from Monash to take up the offer of a top job in the Sri Lankan Public Service — as a permanent head in the Prime Minister's Department.

It is an ironic twist of events.

Only seven months ago Dr Weerasooria was arrested in Colombo, his passport confiscated, and he was put under virtual house arrest for alleged participation in the publication of a satiric cartoon booklet attacking the then Sri Lankan Prime Minister, Mrs Bandaranaike.

Since then, however, Mrs Bandaranaike has been voted from office in general elections and under the new Prime Minister, Mr Jayawardena, Dr Weerasooria has been offered the job of permanent secretary in the Planning Ministry. This area forms part of the Prime Minister's Department and Dr Weerasooria will act as one of its permanent heads.

Dr Weerasooria returned to Monash briefly last month while finalising plans for his shift to Colombo and described his anxiety over the last seven months.

The ordeal began on January 22 when he was arrested and charged with

defamation and infringing emergency regulations by publishing a satiric booklet, "The Family Tree". The work attacked alleged nepotism and corruption in the Bandaranaike Government.

The charges were not proceeded with, but Dr Weerasooria's passport was confiscated, only days before he was due to return to Australia after sabbatical leave for the start of the academic year at Monash.

He was put under what he describes as "house arrest". He believes his movements were continuously watched and that his phone was tapped.

Then, on June 5, Mrs Bandaranaike announced elections and in the July 21 poll she was defeated.

Had the former government been returned, Dr Weerasooria said he held fears for his safety, "not necessarily from the top but from those more petty down the line." He had plans for his family to leave Sri Lanka immediately (their passports were not confiscated).

Now, as a member of the administration serving a new government, he sees several important tasks ahead.

He says: "The first will be to wipe out the bribery and corruption which existed under the old regime.

"The second will be to build a more dynamic public service."

He sees his experience as an academic as being important in shaping his new role and intends to use his skills in research, analysis and field work.

Dr Weerasooria, who obtained his doctorate from the London School of Economics, came to Monash at the start of 1973.

He specialised in banking law and, in 1976, published a book "Australian Banking Law and Practice" which is regarded as a foremost student text on the subject. He also researched Australian bank robberies and was working on a United Nations study on population law.

If there is a lesson to be learned from Dr Weerasooria's recent experience, he says, it is of the devastating effects of the unmindful use of unchecked power.

"One phone call by one shortsighted bureaucrat back there in January changed my whole life. It's worth thinking about," he says.

The computer world of 1985

The increased use of computers in the next 10 years will cause dramatic changes in the make-up and skills required of the workforce, an associate professor in computer science at Monash predicts.

Associate Professor A. Y. Montgomery, talking about the "Information Processing Revolution" in terms similar to the Industrial Revolution, makes his predictions in a paper titled "The Impact of Computers Upon the Work Place", delivered to the recent ANZAAS Congress.

Associate Professor Montgomery says that, while few applications of the computer so far have resulted in outright sackings, the main problem will occur if the world economy enters a low growth phase. Those likely to be hit hardest will be young people seeking to enter the workforce.

Labour skilled and semi-skilled in the traditional manufacturing and clerical methods and unskilled labour face the long term prospect of diminished opportunities as well, he says.

How will the young unemployed spend their time, Associate Professor Montgomery asks?

"In social improvement programs, in lounging on beaches or in fomenting political unrest?"

"There is a strong need here for training and retraining in up-to-date techniques and presumably for training in leisure pursuits," he says.

The bright spot on the employment horizon will be for those who can shift their skills to the new processes and young people trained in computer science.

At present 5000 computer science graduates are needed in the Australian workforce each year. Only 1000 suitable graduates are produced.

The shortfall is estimated to be increasing at 26 per cent each year because young people are not offering themselves for training and because there are insufficient funds for the development of suitable courses in educational institutions.

Associate Professor Montgomery claims that the falling cost of computing equipment will quickly force its introduction into all industrial spheres.

By 1985 (one year after the one marked down for attention by Orwell), the cost of outright purchase of a com-

puter for the typical Australian firm will have dropped from \$75,000 to \$37,500 and the cost of a very small computer suitable for incorporation in industrial process control will have fallen from \$1000 to less than \$20.

He says: "Machines increased man's physical capabilities in the first Industrial Revolution; the Information Processing Revolution will augment man's ability to think and promulgate his ideas."

This is the picture Associate Professor Montgomery paints of the computer world of the future:

● In the office, computers will be used increasingly to make strategic, long term planning decisions such as "In which industry should shareholders' funds be employed?" or "Where should a new power station be built?"

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DO DARK NEBULAE HOLD KEY TO LIFE'S ORIGIN?

Scientists at Monash are working on the development of a "chemical clock" — a method of allowing them to determine the age of the dark nebulae in our universe.

It is to these cold dark parts of the universe, gigantic clouds of gas and dust, that scientists look for the formation of stars and associated planetary systems — and the beginning of life itself.

Professor of chemistry at Monash, Professor Ron Brown, briefly outlined the work his team of galactochemists is doing on the "chemical clock" in a paper on "Interstellar Molecules and the Origin of Life", delivered to the recent ANZAAS Congress.

Professor Brown said that, until comparatively recently, astronomers had regarded the dark nebulae as a nuisance because they obscured starlight from potentially interesting stars on the far side of them.

He said it had only been in the last 10 years that developments in the science of radioastronomy had allowed rapid strides in understanding the physical and chemical nature of the nebulae.

It was now widely accepted among astronomers that new stars and associated planetary systems were formed by the gravitational collapse of the huge clouds of gas and dust.

Further, the use of the radiotelescope, together with the technique of molecular spectroscopy had revealed that a considerable number of interstellar molecules existed in these nebulae, shattering the traditional view that stars and the interstellar medium were composed of individual atoms or atomic ions and free electrons.

Professor Brown said: "Hot on the heels of these initial discoveries came the speculation that in these interstellar molecules we were seeing the chemical precursors of life already existing in space in the nebulae which had not yet condensed to form new planetary systems."

Professor Brown said that his team had been concerned by one aspect of work done on estimating the progress of chemistry in these nebulae — the use of the steady state approximation.

Not steady

The team's research in this area had now shown that the concentrations of various simple molecules were expected to fluctuate widely during the lifetime of a dark nebulae so that at no stage were the bulk of the constituents of a dark cloud in a steady state situation.

Professor Brown said that if the team was able to measure the ratios of concentrations of molecular species then, as a function of time, these could be used as a chemical clock.

He said: "This would be a great breakthrough because hitherto there has been much debate about the age of dark nebulae but there has been no technique available for any observational test of the various ideas."

Professor Brown suggested that these interstellar molecules could hold the key to the origin of life.

Outlining what he described as still a "very speculative theory", he said:

"When the dark nebulae collapses to form clusters of new stars and surrounding planets, there is a considerable debris left in this process which ends up as the smallest parts of the planetary system, objects that we refer to as comets and meteors. By study of the moon and inner planets we know that there were very heavy falls of meteors on all of these bodies during the first half billion years of the history of the solar system. This corresponds well with the time at which the earth had cooled down and conditions under which it was probably possible for prebiotic molecules to survive had been established.

"The most common form of meteorite is one called a carbonaceous chondrite, the name implying that the meteorite has a substantial content of carbon. Chemical studies of the content of these meteorites, especially one that fell at Murchison in Victoria in 1969, have revealed an interesting array of organic compounds. These include many amino acids and a number of nitrogenous bases including all of those involved in DNA. Moreover, there is a report of some Russian studies in which an organic polymer exhibiting a double spiral structure

reminiscent of, but not identical with, DNA has been extracted from a carbonaceous chondrite.

"Thus the alternative scenario for the early stages of the origin of life is that when the young earth had freshly cooled down and the first shallow pools of water had formed, there is a heavy fall of meteorites including a number of carbonaceous chondrites. These meteorites are prone to break open readily on falling and are porous enough to soak up some water.

"If such a meteorite fell into a shallow pool, the conditions appear to be favourable for absorbed moisture to promote further reactions among the constituent organic molecules that these might include condensation reactions that produce biopolymers — at least in primitive form.

"Some workers have even suggested that they have discerned formations in meteorites that suggest tiny globules reminiscent of very primitive forms of cell structure.

"Conceivably then prebiotic chemical evolution even up to the stage of formation of somewhat organised packaged chemicals could have occurred following the fall of carbonaceous chondrites."

But myth was more revealing

As "gee whiz!" as talk of interstellar molecules and modern theories on the origin of life might be, there's no doubt they don't make 'em like they used to.

Explaining a classical Greek legend on the origin of the Milky Way, Professor Ron Brown said in his ANZAAS paper: "(It involves) the attempt by the unfaithful Zeus to have immortality conferred on his son Hercules who was the product of his union with a mortal, by having Hercules suckled at the breast of his wife Hera.

"The sleeping Hera was rudely awakened and displeased at having the young Hercules thrust upon her.

"In the disturbance some of her milk was spilt and became the stars of the Milky Way."

Product of a more fertile imagination, you might say.

Stereotypes persist, school study shows

Do women make good leaders of men?

In the eyes of Victorian schoolboys the stereotype persists that they don't, a survey by a Monash researcher has revealed.

And if boys do not think that women are as capable leaders as men, then it is highly probable that men think likewise, says Ms S. Sampson, lecturer in the Education faculty.

Ms Sampson delivered a paper on "Sex Role Attitudes and Education: Sex Stereotyping in Some Victorian Schools" to the recent ANZAAS Congress.

Her work is based on a survey conducted last year in 10 suburban high schools — five with female principals and five with male principals. Questionnaires containing sex role attitude questions and others relating to male/female abilities were completed by 800 boys and 800 girls selected randomly.

On sex role attitudes, the survey showed that males were consistently more traditional in their response pattern than were females. The sex differences occurred in both types of schools.

And while a majority of responses indicated an egalitarian attitude it was noted that questions concerning parental roles elicited traditional

responses from both sexes.

On questions relating to men and women's abilities at leadership tasks — deciding, understanding, instructions and cooperation — most students replied that 'individual men and women may be equally good at these tasks.'

Ms Sampson says: "However, of those selecting other responses, a significant majority chose men as better at the instrumental tasks (deciding what needs to be done; giving instructions to other people; getting people to cooperate to get things done) and women at the affiliative task (understanding how students feel), which accords with traditional stereotypes of male and female abilities.

Differences

"Sex differences were highly significant once again and were not related to whether the school had a male or female principal. Whereas a majority of girls believed that both men and women could be equally good at the instrumental tasks, on no task did a majority of boys choose either females or both male and female as equally competent.

"Clearly, to these boys only men possess characteristics such as those cited which might be expected in a good leader."



Transport needs vary

More research should be carried out into the different public transport needs of men and women workers, two members of the Monash geography department suggest.

In a paper given to the ANZAAS congress in Melbourne in August, Anna Howe and Kevin O'Connor say many large scale urban transportation studies fail to differentiate between the travel problems of men and women.

Many of these transportation studies, they say, apparently assume that there are no significant differences between the transport needs of men and women or that they are unimportant.

In their paper, entitled "A Working Woman's Place Is Near the Home" Howe and O'Connor point out that the local area is relatively much more important as a source of employment for women than for men.

Second, the Melbourne city area is slightly more important as a destination for women, and third, the locations of jobs taken by men are far more dispersed than those for women.

They say that, overall, almost two-thirds of women's jobs are in the local government area they reside in or in the central city.

However, less than half the male workforce jobs are so located, and more than half are dispersed across the metropolitan area.

They say evidence is mounting that women are over-concentrated in a limited number of occupations, and often at lower levels within these occupations. There is a bias in favor of men in professional, managerial and technical fields, and towards women in clerical occupations. There is also a pronounced bias towards migrant women compared to Australian-born women in industrial work.

● From page 1

Computers

Communication with a computer and a comprehension of complex mathematical models will be two essential skills for people at all levels in the office.

For those at the lower levels, the stress of office life will be reduced because much of the work will be relegated to the computer.

But for those at the top, the pressure will increase as rapid decisions about quickly moving and extremely complex situations are required.

● In the home, video display terminals will allow many workers to operate from their residences, say, three days a week and only travel to their workplace for face-to-face conference on the other two.

People will be able to vote in electronic referenda — "a form of true democracy which will give back to the individual his heretofore lost ability to influence government and his own destiny," says Associate Professor Montgomery.

Cold climate- arthritis link a myth says UK authority

The belief that a cold climate causes arthritis is nothing more than a painful myth, according to a leading British authority on the disease.

Dr Helen Muir, head of the biochemistry division at the Kennedy Institute of Rheumatology in London, says that a cold climate can make arthritis more painful but it is no more prevalent there than in a warm climate.

Dr Muir blasts a second popular belief about arthritis too. It is not, she says, part of the ageing process itself. Rather, it is a slow-developing disease which may be with sufferers from their early 20s but which may only manifest itself painfully, say, in their 60s.

Dr Muir visited the biochemistry department at Monash recently for a week. She was also a guest speaker at a joint meeting of the Connective Tissue Society of Australia and New Zealand and the newly formed Human Genetics Society, held at the University in August.

If "the cold" doesn't cause arthritis then what does?

That, Dr Muir indicates, is a complex question. Much work is being done around the world on the underlying causes, as a base on which a strategy for effective treatment can be built.

'Not strictly hereditary'

She says that arthritis is not strictly an hereditary disease but certain families are predisposed towards having members who are sufferers.

There are two common types — inflammatory and non-inflammatory.

The most prevalent is the non-inflammatory osteoarthritis which affects an average of one in 11 people in Britain.

New directions for arthritis treatment?

A Monash pharmacologist has foreshadowed new directions in the search for an effective treatment of the inflammatory disease, rheumatoid arthritis.

Professor A.L.A. Boura said in his ANZAAS paper, "Prostaglandins, Drugs and Rheumatoid Arthritis", that one possibility centred on a number of anti-inflammatory factors which there was evidence the body contained.

Professor Boura said that isolation and identification of these substances could lead to the production of new anti-inflammatory agents.

At present, he said, there was no drug available which blocked initiation of rheumatoid arthritis or reversed its progression.

This was in keeping with the lack of complete knowledge of the factor or factors responsible for the disease.



Dr Helen Muir and Professor Dennis Lowther, professor of biochemistry at Monash.

One cause of osteoarthritis is physical trauma. Certain sports enthusiasts or professionals — such as football players, athletes and ballet dancers — suffer a high incidence of this complaint. An injury suffered in youth can take up to 40 years to develop as a painful condition.

A second cause is irregularities in the conformation of joints.

Dinosaurs arthritis, too?

Osteoarthritis is found in animals other than man also, especially those with a long life span. In fact, work on dinosaur bones indicates that these prehistoric animals may have suffered from a similar condition.

No drug is yet available to arrest this form of arthritis in all cases. The most successful cure is a joint replacement operation.

Dr Muir says a second common form of arthritis is rheumatoid arthritis, an inflammatory condition, quite different in pathology from osteoarthritis. About one million Britons suffer from it.

Dr Muir says there is strong circumstantial evidence to suggest that this variety might have originally been caused by a germ, but this has never been proved.

Rheumatoid arthritis attacks more women than men and, although it is more common in the aged, it can also manifest itself in the late 20s and in menopause. An associated form, Stills disease, affects children.

Dr Muir has conducted research in connective tissue biochemistry and disease for more than 20 years. As well as working at the Kennedy Institute she is also an honorary consultant at Charing Cross Medical School, a former member of the British Medical Research Council and a scientific adviser to the British Arthritis and Rheumatism Council.

Her acknowledged world expertise was recently recognised by her election to the Royal Society — one of only a few women so honored.

Her visit to Australia has been sponsored by the Rheumatism and Arthritis Association of Victoria with the financial assistance of the Felton Bequests Committee.

At Monash she has been examining arthritis research being done in the biochemistry department. Similar work on the metabolic process in joints is being carried out here and in the Kennedy Institute in London.

For Dr Muir arthritis research has a personal significance — in recent years she has been troubled by a hip complaint.

these toxic effects somehow were a consequence of their mode of action as anti-inflammatory agents.

Professor Boura said: "How can we go about finding better drugs than those available for treating this condition?"

"The answer probably lies primarily in the hands of the biochemist.

"If I were setting up test procedures to reveal such drugs, as one of my first priorities I would set up a biochemical system to detect inhibitors of phospholipase A. Inhibition of this enzyme by the antimalarial anti-inflammatory agents, such as chloroquine and hydroxychloroquine probably makes a contribution to their anti-inflammatory activity.

"Moreover, by blocking phospholipase A, in contrast to the situation with aspirin-like compounds, we may be able to find drugs causing less damage to the kidneys and stomach."

Suburban trips more common, study finds

A Monash study has shown that more Melbourne residents are travelling from one suburb to another to their jobs instead of travelling to the central business district in the city.

The researchers say that throughout a band of middle and outer suburban areas, cross regional journey to work patterns are typical, and increasingly more important than the trip to the central city.

The research work was carried out by Kevin O'Connor and C. A. Maher, of the Department of Geography. They have written a paper, "Changing work-residence relationships in Melbourne, 1961-1971", which was presented to the ANZAAS Congress in Melbourne last week.

The two researchers say that where job growth has been rapid, there has been a "spillover" beyond "laborshed" borders, involving the daily travel of labor from areas outside the "laborshed" — the area which usually provides personnel for industry in the area.

Job growth filled

They say that some areas have seen their much smaller job growth filled in the main by residents within their laborsheds.

These are generally middle or outer suburbs, very often falling within the laborshed of the areas already mentioned. These areas tend to be more residential suburbs.

Finally, there is a third group of areas which have experienced the loss of jobs, sometimes faster than the decline in the number of residents within their laborsheds.

These are all inner city, older industrial suburbs.

O'Connor and Maher say that important changes are beginning to be felt in the spatial organisation of Melbourne.

The major suburbanisation of jobs that proceeded apace during the 1960s has had, as a corollary, a suburbanisation of residences.

Throughout a band of middle and outer suburban areas, cross regional journey to work patterns are very typical and increasingly more important than the trip to the central city.

They say that Melbourne has shifted towards being a city of spread employment areas or a "fairly dispersed multi-nodal metropolis".

Felt more strongly

The authors say: "One can only comment that the nodal effect would be felt much more strongly had this growth been compressed into half the distance.

"Hence, though Melbourne has experienced massive suburbanisation of both jobs and houses, and though these are functionally linked, the spatial pattern is one of a large number of employment nodes rather than a small number of large nodes."

Activities show study relevance

Two Monash departments — civil engineering and economics — have planned special activities this month designed to show secondary students the relevance of their studies.

In CIVIL ENGINEERING, the chairman of the department, Professor Noel Murray will deliver a lecture titled "From Simple Vectors to the Design of Structures" (subtitled "How to design a bridge using string and balsawood") in the Walter Bassett Theatre (E1) on September 14 and 15 at 7.30 p.m.

The lecture is aimed at fourth, fifth and sixth form students.

As well, the audience will be given a tour of laboratories where the department carries out its teaching, research and commercial testing.

Professor Murray said recently: "The main purpose of the evening will be to try to show students that what they are learning in their mathematics, physics and chemistry at school is used in practice."

Pictured is Dr Don Kinder, a senior tutor in civil engineering, demonstrating one of the many models Professor Murray will use in his lecture.

The model demonstrates the validity of the mathematical theory

used in calculating forces in a truss bridge.

Admission to the lecture will be free and tickets may be obtained from Mrs Pam Smith (ext. 3450).

In ECONOMICS, lecturing staff will conduct a series of talks aimed at sixth form economics students on September 17 (from 9 a.m. to 4.30 p.m.) and September 24 (from 9 a.m. to 1 p.m.) in the Alexander Theatre and nearby rotunda lecture theatres.

The lecturers and their topics will be: Mr L. McGregor, "Inflation and Unemployment: Some Current Controversies"; Dr I. Ward, "Economic Systems: China and USSR"; Dr P. Riach, "Power, Politics and Inflation"; Dr L. Maglen, "Poverty and Income Redistribution"; Mr C. Walsh, "Economics of Federalism"; and Dr D. Morawetz, "Problems of Economic Development."

Lectures are free and each will be delivered twice.

For further information contact Ms J. Atkins on ext. 2337.

Education launches summer teaching

Monash's Education Faculty will launch an experimental summer teaching program in its Bachelor of Education course next January to meet the special needs of students who are teachers.

Students will be able to take up to two subjects for credit towards the degree in an intensive daily program from January 3 to 31, rather than in traditional term time.

The program is being offered as a convenience for teacher students, who form the bulk of the Faculty's part-time students, and whose ability to attend classes at Monash during the year may be limited by pressure of work or distance.

Mannix College, across Wellington Road from the campus, will be available for accommodation for country students.

Services

Although January is a University holiday, catering and other services will be available in the Union, and the Library will be open.

A range of subjects will be offered daily in two sessions, from 8.30 a.m. to 10.30 a.m. and 11 a.m. to 1 p.m.

While class contact will take place during January, students will have February to complete major papers and results will be published in March.

Although the summer program is being aimed particularly at teachers it will be open also to all new and current Bachelor of Education students.

(To be eligible for B. Ed. entry, candidates should have a degree, such as a Bachelor of Arts, and a year of teacher training, such as a Diploma of Education, from recognised institutions.)

Students seeking to enter the B. Ed. course who wish to start their studies in the summer program must submit their applications to the Education Faculty secretary, Mr L. Shaw, by December 5.

Enrolments and re-enrolments in the summer program should be made from December 14 to 16.

For further information contact Mr Shaw on ext. 2843.

Drama: make it Monash

Campus playwrights will have the valuable opportunity of seeing their scripts performed during the Monash Playwrights' Festival to be held from September 12 to 16.

Each day, from 1 p.m. to 3 p.m., the Monash Players will present either entire plays or scenes from works by local writers in the Union Theatre.

The presentations will be directed by a writer-director with the Australian Performing Group, Phil Motherwell.

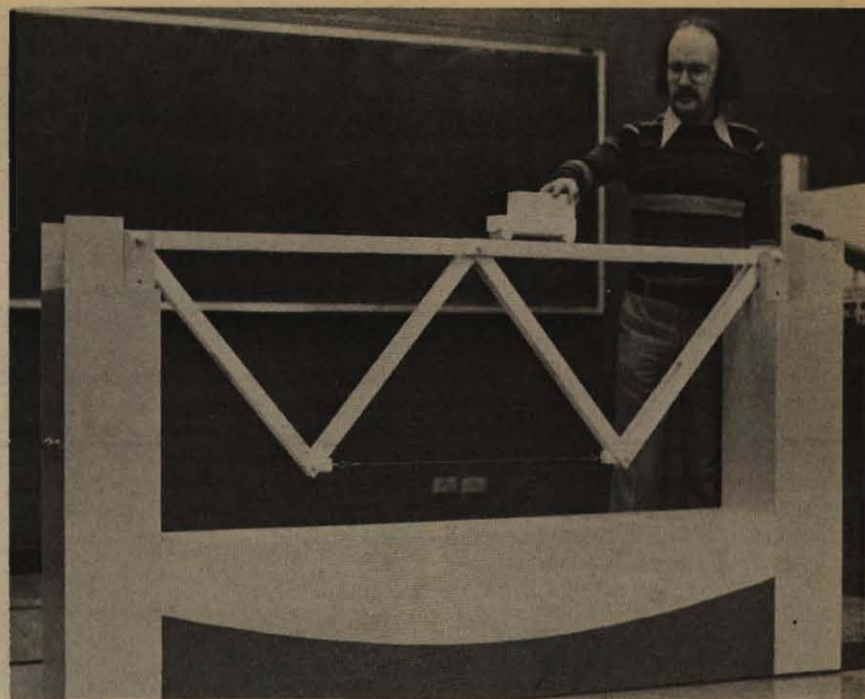
After the performances there will be the chance for constructive criticism when Motherwell will discuss the works with their authors.

The sessions will be open to the public and are free.

During the same period, in the evenings, the Monash Players will present *The Dwarfs* by British playwright, Harold Pinter.

Originally written as a radio play, the script was recently adapted by the playwright for the stage. It deals with the fears of three men — one of whom has visions of dwarfs.

Performances will start at 8 p.m. For further information contact ext. 3108.



Last month, seven members of the Monash Women's Society learned at first hand some of the problems confronting the rural community — in particular, the wives of dairy farmers in the Western District.

The Monash group accepted an invitation from the newly-formed Rural Women's Action movement (RWA) at Cobden to spend a day touring farms in the area, "to gain some insight into the problems of the rural wife."

Here, Women's Society president Ruth Firkin reports on the visit — and concludes with a plea for help:

'Understand farm problems' plea

The Rural Women's Action (RWA) president is Mrs K. May, of Lake Purrumbete, herself a dairy farmer. She has thoroughly researched many of the problems besetting the farms of Victoria and has made frequent representations to politicians on both a Federal and State level.

The apathy on the part of both governments to what must prove to be the eventual breakdown in the food production system in this country is quite frightening to city slickers such as us.

Consider, for instance:

- A quality dairy herd takes a minimum of five years to build to an efficient production level.

- The average age of the dairy farmers of Victoria is 57 years!

- A man and wife working a 12-hour day, 7 days a week, efficiently and tirelessly, can earn a joint income of \$3000 - \$4000 a year, depending on the size of the herd and on their overhead debts.

Certainly — and it's poor consolation — paying income tax is a thing of the past for these farmers.

Let me quote from a letter the RWA received from the Rural Women's Action Committee based at Brigalow, Queensland, and formed in 1971:

"Our members claim that six years ago we could see the rural industries were heading for the very situation we find ourselves in today.

"We honestly thought that if we approached decent politicians and put our case, these politicians would see the truth and do something constructive to hold and then reverse the situation. How wrong we were!

"We knew very little about financial-economic policies on the creation and control of credit but after six years of reading and studying we have gained knowledge and understanding of why things are in such a financial mess . . ."

Now the RWA is desperately trying

to co-ordinate the findings of such groups throughout Australia in a last ditch effort to improve the situation before one of our most valuable assets is irretrievably destroyed. And being eroded irretrievably is precisely the current state of affairs.

Any requirements or improvements demanded by necessity or by changing health laws are financed on low-interest government loans; but with an income of no more than \$2000 a head, what hope has a farmer of repaying a \$9000 loan for a refrigerated tank to store his milk?

What hope have the hard-pressed smaller farmers of the recently burnt-out western districts got of repaying the loans from the Federal Government to rebuild and restock? And that disaster was not due to their mismanagement or carelessness.

Fences everywhere are falling into disrepair for there is no money for labor to maintain them. Drugs for dairy herds are being kept to a minimum, often at great risk, for there is no pharmaceutical benefit here. Registers of the herds are no longer kept because book work takes time and time is already at a premium.

The RWA supported a rally at Glenormiston Agricultural College last week — a rally entitled "Farmers Fight for Right."

One can only hope that, as a result, the farmers and their wives can find a united voice in order to achieve equitable status in our community, and that the rural economy can weather what looks like its Cyclone Tracy.

What the RWA is also seeking is support and advice from any other group. If anyone reading this article can give any information as to whom the RWA should contact for positive help or advice towards finding a solution, I would happily pass on such information, or suggest writing to Mrs K. May, Box 91, Cobden, 3266, directly.

DOUBLE-BARRELLED ATTACK ON THE ENERGY ISSUES

A leading US expert on the law in relation to solar energy has urged the Australian Government to adopt a clearer, more forceful stand on the energy issue.

This, he suggests, should be double barrelled, consisting of:

- A public education program aimed at reducing the community's energy consumption expectations.
- The removal of uncertainties surrounding alternative energy sources by encouraging the development of their technologies.

The Government should fund research into ways of maximising our energy options. If it didn't, comments on the "uncertainty" of services such as solar power would become self-fulfilling prophesies.

Sounding the warning for Australia was Dr Alan Miller, a lawyer with the Environmental Law Institute in Washington.

Dr Miller is visiting Macquarie University in Sydney this year as a Fulbright scholar.

He was at Monash recently to address a public one day seminar on "Uranium, Solar Energy, the Law and the Citizen" run by the Law Faculty.

Speaking before the conference, Dr Miller said that President Carter's recent warnings that the American public must reduce its energy consumption were a start.

There had been few similar warnings from leaders in this country. While Australia was largely cushioned against the last fuel crisis it may not be against a future one.

Dr Miller said: "The government must pave the way before it is too late. It cannot go too far out in front."

Government responsibility

It was nonsense for the government to suggest there was nothing it could do in the short term to clear uncertainties about future energy supplies, he said.

In large part, government was responsible for the uncertainty.

It had checks on the supply of oil and gas, the rates at which they were sold, determined the status of nuclear energy, could provide incentives for the development of new technologies and their implementation, and could even legislate away some of the uncertainties on the use of these technologies.

Wine shipment

The Monash Wine Syndicate — formed to bid at overseas auctions for fine wines and arrange their shipment to Australia — is expecting the arrival of its final consignment of European wine.

Syndicate member, Dr P. Hudson, says that small quantities of the wine are still available, including a delightful Spanish dry white, Castillo de los Enfants 1971, which costs about \$2.80 a bottle.

He adds that there are also classed clarets of excellent vintage such as 1966 and 1970, a 1971 German wine from the Saar and vintage ports from 1960 and 1966.

For further information contact Dr Hudson on 729 4097.



• Dr Alan Miller

Dr Miller said it was not good enough for Australia to rely on "importing" alternative energy research.

He said: "Overseas research will be of help but it cannot be the foundation of Australia's energy program. Foreign research will not address legal, institutional and technological innovation problems peculiar to Australia.

"Nor will it necessarily address the technical problems of greatest priority here. For example, two-thirds of the US solar research budget has gone into technologies for electricity, an application that may be of marginal benefit in Australia.

"Even when basic research can be imported, considerable design work will always be necessary to ensure efficient operation in local conditions.

"Finally, experience has shown that foreign technology often comes with strings attached; it may not even be for sale until part way through its useful life.

"Solar energy research is likely to struggle along in Australia with or without government support, if only through the ingenuity and resourcefulness of the research community.

"However, in the absence of a firm government commitment to create a

climate in which alternative technologies can survive, their use is likely to be delayed many years beyond the point of technical acceptability.

"The time to begin this new direction is now; if we wait until a crisis arrives, it will be too late."

Dr Miller said uranium had no more certain a future than solar energy, but for political rather than technological reasons.

The anti-uranium protests had recorded their first deaths and the issue was being referred to as the "Energy Vietnam".

Paralleling eventual widespread acceptance of the anti-Vietnam arguments, he predicted that anti-uranium sentiment could rapidly become the dominant political philosophy.

Legal obstacles to solar energy

Dr Miller said there were two legal obstacles to the use of solar energy systems: the pricing policies of existing energy suppliers (gas and electricity), and guaranteeing access to sunlight.

He cited a recent case brought by solar-using householders in Colorado against the local power supplier over its tariff policy.

The residents objected to the high rates charged for the "conventional" energy they used intermittently and off-peak to augment solar supplies. They won their case.

Australia in ideal position

Australia, with State-run energy suppliers, would be in an ideal position to encourage solar use through favorable price policies.

Dr Miller said that the question of sun rights should be dealt with by governments now.

As one man's solar collector was often another man's airspace, changes to building and planting regulations may be necessary.

New areas should be "solar zoned" so that property owners were guaranteed access to sunlight on their northern frontage.

Tour to study lifestyles

A Monash education student and Migrant English teacher, Miss Ann Waxman, will conduct a tour of Turkey, Greece and parts of the Middle East during the summer vacation.

Miss Waxman says an aim of the one month tour will be to experience at first hand the lifestyles of the countries in which thousands of Australians have their heritage.

"It will be a chance for us to climb down from our academic ivory towers," she says.

Tour participants will meet beforehand to discuss special interests and to nominate educational institutions to visit en route.

The trip will take in Istanbul, Gallipoli and the Aegean Turkey; Athens, classical sites and selected islands in Greece; and the choice of either Israel or Egypt.

A week is available for group members who wish to visit England before returning home.

There are 50 places on the tour. The inclusive price is \$1700. Tentative date of departure is December 16.

For those a little wary of student travel schemes — the arrangements have been endorsed by IATA.

For further information contact Miss Waxman on 529 4760 or at 3 Errol Street, Prahran.



Attitudes researched

A Canadian psychologist, currently visiting Monash, intends carrying out research on traditional and modern attitudes among young Australian Aborigines and white secondary school students from both rural and urban environments.

She is Dr Pauline Jones, Director of the Institute for Research in Human Abilities and Associate Professor of Psychology at the Memorial University of Newfoundland in St. John's. Dr Jones is visiting the Higher Education Advisory and Research Unit at Monash.

In Australia she will be extending the Canada Council-sponsored work she has been doing for the last two years in the province of Newfoundland and Labrador.

There, she has been examining modern attitude change and traditional-modern attitude conflict encountered by students from rural communities when they move to larger urban areas for post-secondary education.

She has been looking at the relationship between students' traditional or modern attitudes and their home environment and discovering whether certain students are more susceptible to change after moving to an urban centre.

She has researched the extent to which students' traditional or modern attitudes affect their achievement in high school and in their new educational setting.

Dr Jones' work also involved research among the students' mothers, assessing inter-generational differences in attitudes.

She is still marshalling data and has reached no firm conclusions yet.

Dr Jones chose Australia to extend her work partly because of the interesting potential of the Aboriginal population with its wide variance of integration and "acculturation" into the larger Australian culture.

She will be examining differences in traditional-modern attitudes among the Aborigines and seeing if these relate to the level of "acculturative" stress.

She also intends replicating aspects of her Canadian research among white high school students here.

She plans, where possible, to select students of the same age and from the same areas as the Aborigines — in Sydney, Melbourne, Bourke, Alice Springs and Weipa.

Responsibility urged on text book ordering

It's been the time of year for that duty — compiling booklists for next year's courses — and some academics have come under fire for "irresponsible" attitudes towards textbook ordering.

These attitudes manifest themselves, for example, in a failure to distinguish between texts which will be frequently used and students would do well to buy and those which, more economically, could be borrowed from the Library, and a failure to give the University Bookshop adequate time to order supplies.

The result can be late arriving and unsaleable stock.

Similar problems overseas have prompted suggestions that there is a need for education for the educators in the use of books, their economics and distribution, and the role of libraries.

"Incomplete detail, late lists and, worst of all, total lack of information, coupled with the absence of the staff member concerned, so that no follow-up was possible" — these were the criticisms levelled at individual staff members, departments and faculties concerning their booklist compiling efforts by the Bookshop Board at a recent meeting.

Unobserved deadline

They were made after the deadline for booklists had passed and less than a tenth of orders had been placed.

Among failings which have been criticised are:

- An apparent lack of communication between lecturers teaching different streams of the same subject causing confusion with estimates of quantities required.

- A lack of uniformity in classification of textbooks and reference books.

- Textbooks ordered not being the ones finally used.

- Lists in faculty handbooks differing from those given to the Bookshop.

It is certainly not a situation peculiar to Monash.

The problem came under scrutiny at a recent conference on "Books and Undergraduates" held at Royal Holloway College in the University of London. The conference proceedings

were published by the National Book League last year.

The Chairman of the University Grants Committee and after-dinner speaker on that occasion, Sir Frederick Dainton, talking about the British situation, said that most of the reading lists he had seen were totally unrealistic.

Too often, he said, they were a kind of parading of the little knowledge of the lecturer and what he hoped to put into his course.

Sir Frederick said it was the "height of irresponsibility" to "overprescribe" textbooks.

He suggested that fewer books should be recommended and lecturers should point out which books would be needed for only occasional reference in the library.

He also suggested that students should be instructed in the use of libraries — "instruction not of the kind where they have a 3½p tour instead of the £5 tour, but a really systematic study of the library and how to use it, and how to respect it and so on."

Publisher Gordon Graham told the conference that undergraduate use of books could not be improved by lecturers who were themselves unclear about the role of books.

Mr Graham said: "There seems to be general agreement that the attitude of lecturers toward the use of books in higher education, their knowledge of the role of books in the educational process and some familiarity with the economics and distribution of books are essential to what we are trying to achieve."

"Equally there seems to be agreement that there is considerable room for improvement."

He suggested that seminars should be conducted for staff on students' use of books.

He also said that the cumulative pressure from students and librarians on the one hand and from publishers and booksellers on the other should be brought to bear on teachers.

He added: "Of these it is thought that students are the most important because they are the centrepiece; they are what it is all about."



Research windfall

Monash's Centre for Research into Aboriginal Affairs scored a windfall last month: three large cartons of research material, and a cash donation, from the Department of Aboriginal Affairs.

The gifts came in response to the recently-launched Elizabeth Eggleston Memorial Fund Appeal which is aimed at establishing an Aboriginal resource centre.

The cartons contained hundreds of books, reports, theses and other documents of great historical, sociological, legal and political significance.

According to Mrs Gloria Moore, secretary of the Centre, the collection represents a very important contribution to the growing stock of source material.

Mrs Moore is pictured above with Aboriginal author Colin Johnson, who has joined the Centre as a research assistant. (Mr Johnson is currently researching a new text book on the history of Australia — before Captain Cook).

Donations to the Elizabeth Eggleston Appeal are still being received.

Cheques should be made payable to Monash University and sent to the chairman of the Centre for Research into Aboriginal Affairs, Professor L. Waller. Envelopes should be clearly marked 'Elizabeth Eggleston Appeal'.

Staff members may authorise deductions from their salaries over a period of up to 12 months. A special form authorising this is available from the Finance Development Officer, in the University Offices.

Monash artist in

The 'terror' is in error

The reputation of the eagle as an apt symbol of supremacy and swooping terror has taken something of a nosedive.

Associate professor in zoology at Monash, Dr Douglas Dorward, takes a serve at some of the myths surrounding the eagle in a recently published book, *Wild Australia*.

While Dr Dorward is not exactly suggesting that the eagle is as benign as the budgie, he does say that the bird does not reign supreme and unmolested over its feathered kind. On the contrary, it is frequently pestered and mobbed by smaller birds.

The eagle's infamy as a relentless killer of sheep has no just base either, he says.

"Wild Australia" is based on work Dr Dorward did for an ABC-TV series of the same name. Published by Collins, the book is handsomely illustrated with paintings and drawings by the noted Australian artist John Olsen, and photographs.

The book's subtitle is "A View of Men and Birds" and it looks in part at the impact of man on some species of bird.

Birds' resilience

The picture is not always pessimistic. The author details cases of birds' resilience to encroachment and, in a few instances, the not-too-late arrival of common sense on the part of man.

The book also parallels, perceptively and wittily, the behaviour of birds with man's.

Dr Dorward dispels the myth of the eagle as the ruthless adversary of livestock by referring to the findings of a CSIRO Division of Wildlife Research project which studied the bird in a relatively undisturbed habitat, the Nullabor Plain.

Eagles, he says, prefer small, furred animals such as rabbits for food.

CSIRO's major finding was that, even in high density sheep farming areas, lambs formed only seven per cent of the specimens in eagles' nests. Some of these would have been dead before the eagles took them.

It was also calculated that in an eagle territory of average size, 30,000 square kilometres, about 4000 lambs would be born in the season. Only half a dozen of these would end up in the eagle's nest.

These are average figures for adult birds. Dr Dorward says it is possible that young, unmated birds (or "avian teenagers" as he calls them) do become rogues among lambs and if they cause a disproportionate amount of damage there may be a case for their selective destruction.

Dr Dorward says that, far from being terrorised by the eagle, smaller birds such as the crow can often give it a hard time.

Being fond of carrion but unable to

Politics and unis don't mix, m'lady

Political activity in universities (well, most of them) is today an accepted, if sometimes uncomfortable, fact of life. But it wasn't always so.

Last week, Reporter received a tearsheet that offered a fascinating commentary on the 'unenlightened' attitude of university authorities circa 1920.

It was a page from the *Journal of Contemporary History* (1970) and included part of an article by Professor Arthur Marwick, professor of history at Britain's Open University, in which he traced the early struggle for recognition by political clubs at Oxford and Cambridge.

Discussing the Oxford University Labour Club, founded in 1919, Professor Marwick wrote:

"The reply of the Vice-Chancellor, Lewis R. Farrell, to the request by the

Oxford Labour Club secretary (a girl) for permission to hold a public meeting on China, to be addressed by Bertrand Russell, is so illuminating on the attitude of age and authority that it merits quotation in full:

"My reply to your request must be an unconditional refusal. I object to your Club, which you call the 'Oxford University Labour Club, holding any public meeting at all. Apart from the question whether Mr Bertrand Russell is a desirable person to address Oxford undergraduates on problems that involve social morality, it is against the law of the university for undergraduate members to take part in meetings of an agitating tendency. It is still more objectionable that they should organise them. We also object to their assuming the name of Oxford University for a party union of a class-dividing tendency. If your club wishes to exist, it must keep itself entirely private, both in respect of meetings and publications; otherwise

we shall have to take steps. Your organisers ought to have asked my opinion before venturing to take such a name.

"I will now speak a few words to you more in loco parentis, as you are an undergraduate member of the University and newly admitted. I earnestly advise you to concentrate on the purpose for which you have come here, which is the increase of knowledge through honest study. It is premature for you to be taking violent sides in violent political controversies. What you want to do is to think and to know more. These public meetings do not make for the increase of knowledge or for greater clearness of thought obtained by fair and careful argument on both sides. You will be more fit to deal with social problems later, if you concentrate your mind and time on the more abstract studies that you have chosen to pursue. This advice applies equally to our women as to our men students."

academic joins top a bird's eye view

kill or rip through hide, the crow keeps close to the eagle to pick up the scraps from its table (although when food is scarce the crow can sometimes find itself on the eagle's menu).

The eagle's talons make it almost useless as a walker. Crows seem to sense this incapacity on the ground and dare to approach quite closely. If the eagle were to attempt to attack one of them, the others would be on to the meal in no time.

Human response

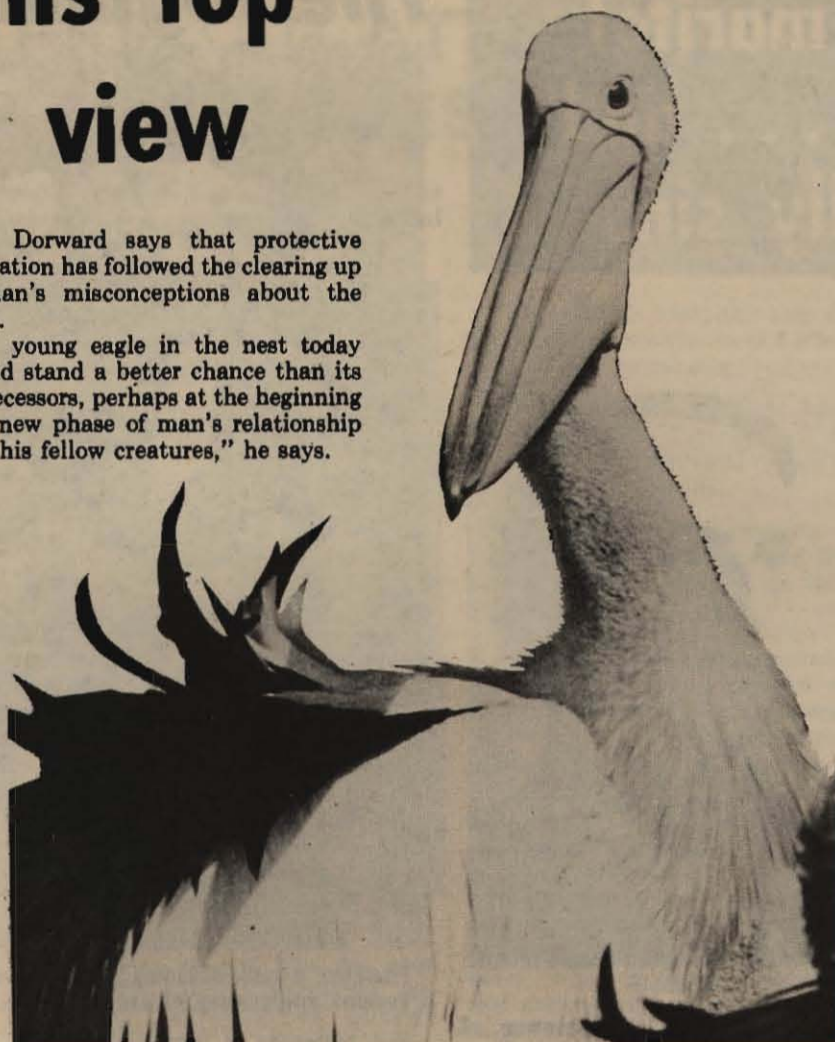
Dr Dorward says: "The eagle's stance does look like the defiant posture of a fierce conqueror, but this is a human response to human features of aquiline nose and beetling brow; these can have no such meaning for other eagles or other birds.

"Indeed without that human interpretation there is something slightly pathetic about this great bird clamped on its rotting carcass, not quite sure how to outwit the waiting robbers.

"That is another interpretation from a human angle but it is closer to a biological explanation of the eagle's relationship with the crows: it is the struggle for existence."

Dr Dorward says that protective legislation has followed the clearing up of man's misconceptions about the eagle.

"A young eagle in the nest today should stand a better chance than its predecessors, perhaps at the beginning of a new phase of man's relationship with his fellow creatures," he says.



ABOVE: Once a pest, now protected — the pelican is a splendid example of a survivor against natural predators and man. This pelican was photographed in the Coorong, S.A.

LEFT: 'Wild Australia' author, Dr Douglas Dorward (left) and artist, John Olsen, at work on the book.

BELOW: A scene at day's end on Albatross Island. Adult albatrosses greet neighbours with a 'baa'. Their feathers once brought 2½d a pound on the Tasmanian market.



Is the \$ our only gauge of wealth?

Have Australians learnt to appreciate their "natural wealth" in terms other than dollars and cents?

It is a question suggested but not answered in Dr Douglas Dorward's new book, *Wild Australia*.

YESTERDAY

YESTERDAY, 140 years ago, Albatross Island in Bass Strait was a focus of attention. There, that "most superb of oceanic birds", the albatross was readily available — and its feathers were bringing tuppence ha'penny a pound on the Tasmanian market.

Sealers were doing a brisk sideline business on the island. They had perfected a method of capturing the albatross in a deep cavity in the middle of the island, known as the State Prison. They drove the birds in their hundreds over the edge down into it, there to be killed and plucked of their feathers.

In one corner of the "prison" there is a cave where, according to an early visitor to the island and missionary, George Robinson, the sealers' women worked, plucking the feathers amid piles of putrid albatross bodies.

Dr Dorward writes: "One hundred and forty years later we found the stench had gone, but the heaps of bones were still there. Amongst them were some heads with distinct depressed fractures of the skull, showing that the sealers had killed the birds exactly as Robinson described, 'with clubs . . . by a blow on the head'."

About 3200 albatrosses were killed for each cargo load — the estimated breeding population of the island now.

Today Albatross Island is a protected sanctuary.

TODAY

But TODAY also our attention is on the Arnhem Land Escarpment, not so much because of its wealth of natural interest but because of its potential uranium wealth.

Dr Dorward says that while the Northern Territory's mineral resources have been established its natural ones have not.

A survey team from CSIRO's Division of Wildlife Research is currently compiling information of what animals are there.

Among the biological curios already documented are the freshwater crocodile, the pitted shelled turtle, the white lined honeyeater and the black banded pigeon.

There are also 22 kinds of frogs, 75 species of reptiles and 230 species of birds.

As well, there is a great gallery of Aboriginal rock paintings on the Escarpment.

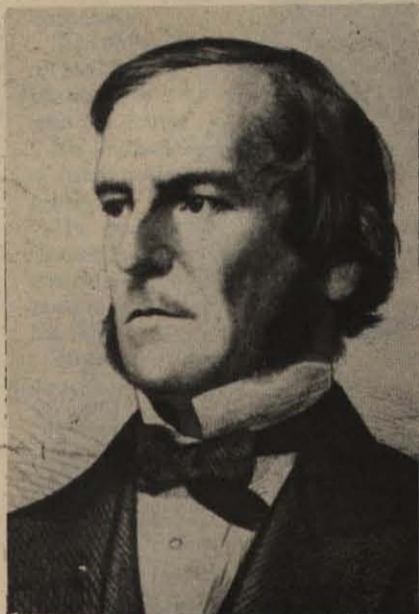
Dr Dorward says: "The question is whether the people that made them will lose themselves and their art, and whether one of nature's grand designs will be converted by men into a matter of profit or of loss."

Maths . . . marital miserliness . . . and the 7 deadly sins

The writers:



● De Morgan



● Boole

Whoever said that art and fun didn't figure in the science of numbers?

The mathematics department at Monash has proved the myope wrong by recently presenting a History of Mathematics seminar featuring a dramatised version of letters written in the mid-19th Century between George Boole (modern day computers depend on Boolean algebra) and his friend, Augustus De Morgan.

Dr Chris Ash played George Boole, Professor J. N. Crossley, De Morgan, and Mr Gordon Smith, narrated.

It is little known that Boole considered applying for a chair at Melbourne University when it started.

Wrote Boole to de Morgan of his mooted Australian visit: "I have not gone to the diggings yet. If any one shall tell you that I have, believe him not. I hereby enter into a solemn engagement not to transport myself thither without consulting you on the subject. How could you imagine that I should expatriate myself without at least bidding you good bye?"

But Boole had special reasons for not coming to Melbourne.

De Morgan, congratulating Boole on his marriage, wrote: "You know the derivation of the words husband and wife? They are from the Sanskrit which compresses a good deal in few

letters. The word wife originally means a demanding of money — and the word husband means a person who deceives himself and the truth is not in him if he imagines that by any possible method he will avoid forking out."

For those who believe the language of mathematics to be mumbo-jumbo, De Morgan had a few choice words about another language, German.

He wrote: "I impute to that unfortunate language seven deadly sins, which are as follows: one, too many volumes in the language; two, too many sentences in a volume; three, too many words in a sentence; four, too many syllables in a word; five, too many letters in a syllable; six, too many strokes in a letter; seven, too much black in a stroke."

In a Palm Court setting (embellished with plants from the maths department but unfortunately lacking an aspidistra), seminar participants were also serenaded by 19th Century ballads to set the Victorian mood.

And to prove that the cross-disciplinary approach wasn't all one way, as well as mathematicians, the audience consisted of librarians and a lawyer with mathematical inclinations.

The impersonators:



● Crossley



● Ash



● Smith

The rogaining champs



Starter's instructions just received, they're off at the beginning of a recent rogaining championship.

But rogaining is hardly the event you start at a canter.

It's the sport of 24 hour cross country navigation and one in which Monash participants are increasingly making their mark.

Monash teams won both the men's and women's sections of the Australian Universities Championship organised recently by Melbourne University at Kinglake.

Members of the winning teams were Ian Davies, Neil Phillips, Rod Phillips and David Rowlands; and Christine Arnold, Cathy Crock and Robyn Anker.

Christine Arnold was also a member of the winning team in the women's section of the recent annual South Australian championships.

A men's team from Monash came fourth in their section.

Both results were described as valiant efforts considering the teams' shortage of sleep on the way over to Adelaide.

Next in the rogaining calendar is a "semi-event" — a rogaine over 12 hours instead of the traditional 24 — to be held on September 24.

This event is considered especially suitable for beginners.

For further information contact Gordon Davis on 89 9404 or Neil Phillips on 544 2613.

A tribute to Hector, Camo

The department of philosophy is planning a permanent reminder of its two founding professors, Emeritus Professor Hector Monro (March, 1961-December, 1976) and Emeritus Professor A. C. (Camo) Jackson (February, 1967-December, 1976).

It will take the form of photographic studies to be taken by Mark Strizic, and mounted by the department of visual arts.

Explaining the project, Associate Professor John McGeachie says: "Many of us who have had the privilege of working and studying with Hector Monro and Camo Jackson feel that some visible trace of their impact over the years would grace the department in which they worked, and through which they have influenced many generations of students."

Past and present staff and students who would like to contribute to the cost of the project are invited to contact Associate Professor McGeachie in the department of philosophy.

Help for the handicapped

A committee has been set up to advise the Vice-Chancellor on the needs of people on campus who are handicapped.

The committee's task will be to encourage those who are handicapped to make known their needs for facilities and equipment, to assess those needs and make recommendations on them to the Vice-Chancellor. It will also provide advice in relation to, and implement communication with, those who are handicapped in some way.

Chairing the committee will be the Deputy Chancellor, Mr Ian

Langlands.

Its membership includes three students, Miss Helen Gillies, Mr Jim Finn and Miss Sue Shaw.

It expects to meet once a term. A committee spokesman said that the Union Desk would be the first point of contact for people with handicaps who encountered difficulties.

Problems raised would be referred to the Assistant to the Warden of the Union, Miss Caroline Piesse, a committee member, who would offer advice and a solution where possible or refer the matter to the committee.

Study shows new migrants earn less initially

A study of the economic situations of recently arrived immigrant families has shown that they are earning less than established ones.

However, the study, which was carried out by Professor Ronald Taft, revealed that the males, at least, were increasing their earnings at a fast rate.

Professor Taft, professor of social psychology in the Monash Education faculty, examined the economic situations of 100 British, Maltese and South American family groups which arrived in Australia in a specified period in 1974 and 1975. They were given repeated interviews from the time of their arrival until September, 1976. At the time of the last interviews, only two out of the 85 males were unemployed and only one of the wives described herself as unemployed.

During 1976, 65 per cent of the wives of the immigrant families were employed, and the figure for South American wives was 77 per cent, compared to 58 per cent prior to emigration.

By comparison, about 47 per cent of women in the 25 to 44 years age group in Australia were in full or part time employment.

Professor Taft said: "The average incomes for the British immigrants were higher than those for the other two nationalities and, as time went on, the Maltese earned relatively less than the other two. This applied to both of the sexes taken separately and to the combined incomes.

"The higher wages of the British immigrants were not reflected in the combined incomes because fewer of the wives worked. In the year 1975-6 the inflation rate was about 16 per cent, and the average increase in employees' earnings in Australia 14 per cent. The increase for the Maltese husbands was well below these figures, at 7.4 per cent, and the increase for the wives in each nationality was also quite low, but the increase in the South American and British husbands' incomes was high.

"Largely as a result of the wives going to work, the combined incomes for the British immigrants rose by almost two-thirds in the year after their arrival to \$207 per week.

"How do the individual incomes quoted in the table compare with those of Australians? The Australian Bureau of Statistics' Survey of August 1976 suggests that the immigrants' incomes

are considerably lower. The median earnings of male employees over the age of 20 (in all categories, both full and part-time, and in all parts of Australia) was \$164 and that of females \$119.

"These are considerably higher than those of the newly arrived immigrants in my study and the discrepancy would have been much greater if the comparison would have been made only for residents of Melbourne of comparable age groups.

"The Bureau publishes figures by occupation and place of birth and, according to these, Greek and Italian males who were employed full-time in the "Tradesman, Production Process and Labourer" category averaged \$151 and females \$110.

"The corresponding figures for Australian-born were \$164 and \$111. The figures for the Greeks and Italians were well above those for the recently arrived South Americans and greatly above those for the Maltese.

"Similarly, the Bureau's figures for the earnings of immigrants from English speaking countries were well above those for very recently arrived British immigrants."

Professor Taft said more of the South American wives were working from the beginning and this was the reason for their combined income of \$152 in 1975, which was relatively high despite the rather low average incomes of the husbands.

In this context, it was important to note that all the working wives were mothers of young children. The fact that so many of these women worked showed the relatively low wages of their husbands and a desire to become established. Professor Taft said this was reflected in their drive to own homes.

By September 1976, none of the immigrants was living in a hostel, and 75 per cent of the British families and 50 per cent of the Maltese were paying off their home.

In contrast, the figure for the South Americans was only 11 per cent.

"Presumably, some of the British and Maltese immigrants brought money with them for housing or were able to borrow from relatives," Professor Taft said.

"But this does not apply to the South Americans, who still have a long struggle ahead of them to get fully established," he added.



So who's the big wheel?

It wouldn't take much to run rings around the intelligence of the person who ran rings around a roundabout on campus recently.

The turf on the roundabout, at a major entrance to the University on the north-east corner, was slashed overnight by a vehicular vandal who skidded many times over the surface, just missing a central light pole and several trees.

The finger is not necessarily being pointed at people connected with

Monash. The roundabout is on an access route from local hotels to nearby residential areas and the damage occurred during the recent vacation.

The cost, however, of those few minutes of happy skidding on a private hot rod track is considerable.

Grounds curator, Mr J. Cranwell, (above) estimates that to harrow and resow the area will be two days work for several men and a tractor. At a time when he is short staffed the prospect doesn't entirely please him.

The Law and Aborigines

Accommodating Aboriginal law in the Australian legal system will be examined at a one day seminar on "The Law and Aborigines" to be held at Monash this month.

The seminar will be held by the Law faculty and the Centre for Research into Aboriginal Affairs on Sunday, September 25, starting at 10 a.m.

The Sir Isaac Isaacs Professor of Law at Monash, Professor Enid Campbell will speak on "Accommodating Aboriginal Law". The chairman of the National Aboriginal Education Committee, Mr Steven Albert, will comment on her paper.

The Dean of Law at the University of NSW, Professor Garth Nelthelm, will address the seminar on

"Queensland Legislation and Aborigines — the View from 1977". It is hoped to have a commentary on this paper from a member of the Queensland Attorney General's Department.

The third speaker will be Mr E Gunter of the Department of Aboriginal Affairs whose topic will be "A Future for Aboriginal Legal Services."

The seminar enrolment fee is \$10 which includes lunch, light refreshments and a copy of the papers (\$5 for students).

For further information contact Professor R. Baxt, ext. 3303; Professor L. Waller, ext. 3302; or Mr C. Bourke, ext. 3348.

Average weekly incomes were:

	AVERAGE WEEKLY INCOME		
	Husbands	Wives	Combined
June-August 1975			
South American	104	87	152
British	118	87	127
Maltese	106	83	141
July-September 1976			
South American	132	97	202
British	150	97	207
Maltese	115	89	160
Percentage increase 1975-76			
South American	26.9	11.5	32.9
British	27.1	11.5	63.0
Maltese	8.5	7.2	13.5

Speaker for Mannix College

A professor who has been described as the leading Catholic New Testament scholar of our time will speak at Mannix College this month.

He is Father Pierre Benoit, Professor of New Testament Studies and Biblical Archaeology at the Dominican Bible School in Jerusalem.

In his only public lecture in Australia, Father Benoit will speak on "Biblical Archaeology — the Passion and Resurrection" on Thursday, September 8 at 7.30 p.m.

The editor of the journal *Revue Biblique*, Father Benoit gained world recognition for his contribution to the

Bible de Jerusalem. In its English translation the Jerusalem Bible is in everyday use among millions of Christians of all denominations.

Father Benoit's special research interests have been in Inspiration and Revelation, the Infancy Gospels and the Topography of Jerusalem.

His visit to Australia is being sponsored by the Australian and New Zealand Province of the Dominican Fathers which conducts Mannix College on behalf of the Archbishop of Melbourne.

Tickets for the lecture cost \$2 or \$1 for students. They are available at Mannix or at the door.

TWO SCENES FROM OPEN DAY — 1977



Above: Faculty of Engineering staff members were busy counselling a steady stream of prospective students who visited engineering displays on Open Day. Right: This visitor to the popular Physiology Department display tried her hand at a "rotary pursuit" machine, which measures hand-eye co-ordination.



An estimated 17,000 people visited Monash on Open Day last month.

Open Day Director, Mr R. R. Belshaw, said that while overall numbers appeared to be down on previous years, the composition of visitors seemed to have changed.

Mr Belshaw said that Open Day departmental reports contained the consistent impression of staff who counselled prospective students that there was a higher percentage of people earnestly seeking information about courses and fewer "sightseers."

He said all departments seemed well pleased with the opportunity Open Day gave for counselling and there had

been suggestions that future days should emphasise this function rather than "fun of the fair" activities.

Mr Belshaw said he believed there were more country visitors at Open Day this year.

Two aspects of the day he praised particularly were the number of senior staff who counselled and the "magnificent appearance" of the grounds on the day.

One of the questions raised on Open Day, in the "great debate" between a Monash team and a Victorian A grade debating team, was "Is the University out of touch with us?"

One speaker in the affirmative suggested that the very existence of an Open Day — "the one day of the year" — proved that the University was out of touch.

Student reporter Sally Cuthbertson put the question to some of the visitors on campus and found it drew a mixed response.

Most people believed that there was room for a greater degree of responsiveness by the university to the community. A number thought that more lectures should be given by academics

in their area of expertise but aimed at the layman.

Among the prospective students Sally talked to, she found some who had made up their minds about applying for courses at Monash next year after talking with staff, and all seemed appreciative of the opportunity to see the University at work.

One recurring aspect she found in visitor-staff contact situations, though, was timidity — sometimes on both sides.

US society honors Monash men

A former Dean of the faculty of Engineering at Monash, Professor K. H. Hunt, and former Ph.D. student, Eugene Fichter, have won the Melville Medal — the highest honor awarded by the American Society of Mechanical Engineers.

The award is made annually for the best original research paper presented to the society.

Professor Hunt and Dr Fichter attended an ASME conference in Montreal last October, when Dr Fichter gave a paper dealing with their work on the geometrical theory of mechanical couplings.

The medal, first awarded in 1927, is named after Admiral George W. Melville, the 18th president of ASME. The gold plated bronze medal is accompanied by an honorarium of \$US1000.

Professor Hunt, who is now professor of mechanism at Monash, was Dean of the Engineering faculty between 1961 and 1975.

Dr Fichter, an American citizen, served in the US Army and then studied engineering at the Rensselaer Polytechnic Institute at Troy, in his native New York State, later taking a master's degree at the University of New Brunswick in Canada. Fichter came to Monash in 1973 to enrol for a Ph.D. and he was supervised by Professor Hunt.

According to Professor Hunt, the research has laid the basis for understanding certain important geometrical principles behind the functioning of mechanical couplings and mechanisms of many kinds.

Professor Hunt, who has been interested in the geometrical theory of mechanisms for some years, said he

and Fichter had "tantalising" speculations that there was a basic logic underlying the geometrical behaviour of a wide class of couplings. If certain hypotheses could be crystallised into theorems, then many discrete known properties of mechanisms would fall into place, and moreover, certain firm predictions made about mechanisms that have not as yet been analysed in detail.

"It appeared that you could 'multiply' the properties of the connections together in a simple manner and then nearly always obtain the correct answer for a coupling comprising multiple-component connections.

"We then sought to establish a general rule for the 'multiplication' of these properties and to prove the rule by resorting to classical synthetic geometry.

"What we have now established are

two basic theorems that can be applied to many mechanical couplings."

Professor Hunt says studies for the research project made use of some classic geometrical theorems formulated more than a century ago.

"We unearthed several very interesting old theorems — in particular some attributable to British geometers Samuel Roberts and Arthur Cayley — which seem to have been forgotten but which are closely related to our work.

"When we established that simple general rules did exist for couplings, we found that we could generalise about the geometrical aspects of mechanisms further than we initially thought we could.

"We also found we could explain apparent exceptions in a perfectly systematic geometrical way," he adds.

'ANTIGONE' FOR RBH

... comedy besides

Sophocles' "Antigone" will be presented in concert recital form at Robert Blackwood Hall this month.

For contrast, the curtain raiser to this classical Greek tragedy will be an intriguing comedy by Christopher Fry, *A Phoenix Too Frequent*. There is a link between the plays — both focus on a woman who has committed herself to death.

The plays, to be performed by a group of Monash staff, students and associates calling itself Understudy, will be presented on September 8 and 9, starting at 8 p.m.

They will be repeated on September 14 and 16, at 8 p.m., in the outdoor amphitheatre, the Moat Theatre, at LaTrobe as part of that university's Community Week activities.

"Antigone" is expected to draw a large HSC and university student audience. It has been 10 months in rehearsal.

The play's director is senior lecturer in the English department, Mr Dennis Douglas.

Moving qualities

Mr Douglas said recently he hoped the production of "Antigone" would give its audience a sharpened sense of the deeply moving qualities of classical Greek tragedy.

In explaining the long and intensive approach to rehearsal, he said that the cast had set out to discover the play by moving and re-moving scenes until they were happy with them.

They had searched speeches carefully for their inner force and true motivation and had discussed scenes thoroughly among themselves and with classical scholars.

Rehearsals had been videotaped to improve the actors' techniques and they had been encouraged to work for other dramatic productions during the rehearsal period to further strengthen their skills.



A SCENE from the production of "Antigone," to play at Robert Blackwood Hall this month. Peter Fitzpatrick (left) as Creon encounters Tim Scott, as Guard. In the background are Elders, Chris McInerney (left), Ian Hamilton and William Potts. INSERT: Sally Montgomery as Antigone.

Heading the cast will be Sally Montgomery as Antigone and Peter Fitzpatrick as Creon.

Sally Montgomery has been absent from the Monash stage for nearly five years and is best remembered for her performance as Desdemona in the 1970 production of *Othello*.

Peter Fitzpatrick has performed recently in a number of English department plays and readings and played the Duke in *As You Like It* earlier this year.

Also in the cast are Helene Shaw,

Chris McInerney, William Potts, Des Stow, William Rowe, Mark Minchinton, Tim Scott and Barbara Calton.

Barbara Calton, who appears with the Modern Dance Group, is also preparing two special dance sequences for "Antigone". The music is being arranged by Judith Wardle, a senior lecturer in English and a music student.

The production is being supported by the Monash English department.

For bookings contact RBH on 544 5448 or the Moat on 478 3122 ext. 2127.



THEATRE

SHADOWS PROMISE DELIGHT

Australia's top puppeteer, Richard Bradshaw, returns to the Alexander Theatre this month with a special shadow puppet presentation for schools and kindergartens.

Bradshaw is director of the Marionette Theatre of Australia which played in two productions, "Hands" and "Roos," at the Alexander in May this year.

The current show will run from September 12 to 23 with performances daily at 10.30 a.m. and 2 p.m., except Wednesdays when the single performance will start at 10.30 a.m.

Shadow puppets are simple cardboard figures manipulated by wires and rods behind a translucent screen.

While the mechanics of the presentation might sound ordinary the total effect is far from this.

The program will include a depiction of an Aboriginal legend, "How the Sun Was Made," and the adventures of Superkangaroo.

Prices are \$2 for adults and \$1 for children, with school concessions available.

For bookings phone 543 2828.

MONASH REPORTER

The next issue of Monash Reporter will be published in the first week of October. Copy deadline is Monday, September 26.

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

SEPTEMBER DIARY

6-9: Modern Dance — "Rock of Ages", presented by Monash Modern Dance Group, 1 p.m. September 6, 7, 9; 2.30 p.m. September 8. Alex Theatre. Admission: adults \$1.50; pensioners, students, children \$1; modern dance members 80c. Group concessions available.

6: Black Studies Lecture — presented by Monash Centre for Research into Aboriginal Affairs. 1 p.m. Lecture Theatre R4. Admission free. Inquiries: ext. 3348.

7-10: Musical — "H.M.S. Pinafore" and "Cox and Box" by Gilbert and Sullivan. Presented by The Babirra Players (Community Theatre activity). Nightly at 8 p.m. Alex Theatre. Admission: adults \$3.30, students \$2. Bookings: 277 1707.

8: Play — Understudy presents Sophocles' "Antigone", with Christopher Fry's "A Phoenix Too Frequent". 8 p.m. RBH. Admission: adults \$4, students \$3, children \$2.50. Performance repeated Friday, September 9.

Lecture — "Biblical archaeology — the Passion and Resurrection" by Fr. P. Benoit. Mannix College 7.30 p.m. Tickets at College or door: \$2, \$1 (students).

Computer Course — A series of seven weekly lectures by Dr David Bellair in the BASIC language. 7 p.m. Lecture Theatre S15. Course fee: \$40. (Monash students and staff members free). Inquiries: ext. 2765, 2798.

10: Saturday Club — Richard Bradshaw and his shadow puppets. 2.30 p.m. Alex Theatre. Admission: adults \$2.50, children \$1.75.

11: Concert — Phillip Mischel — clarinet, Henry Wenig — cello, Margaret Schofield — piano. Works by Beethoven, Debussy, Vivaldi, Brahms, Bach. 2.30 p.m. RBH. Admission free.

12, 13, 15, 16: Play — "The Dwarfs", by Harold Pinter. Presented by Monash Players. 8 p.m. Union Theatre. Inquiries: ext. 3108.

12-16: Monash Playwright's Festival — Workshop performances of plays written recently by several Monash students. Directed by Phil Motherwell, writer-director for Australian Performing Group. Pres. by Monash Players. 1-3 p.m. Union Theatre. Admission free. Inquiries: ext. 3108.

12-23: Special Presentation — "Richard Bradshaw and his shadow puppets", for schools and kindergartens. Daily at 10.30 a.m. and 2 p.m. Wednesdays 10.30 a.m. only. Alex Theatre. School concession prices from 80c.

12: Lecture — "The potential of the school to promote student change", by Prof. James H. Block, University of California, Santa Barbara. Pres. by Monash Faculty of Education. 8 p.m. Lecture Theatre R4. Admission free. Inquiries: ext. 2805.

13: Black Studies Lecture — "Decentralising Community Education", by Phil Stewart. 1 p.m. Lecture Theatre R4. Admission free. Inquiries: ext. 3348.

14: Lecture — "From simple vectors to the design of structures" or "How to design a bridge using string and balsawood", by Prof. Noel Murray. Pres. by Monash Department of Civil Engineering for secondary students. Supper and a tour of the Civil Engineering laboratories will follow. 7.30 p.m. Lecture Theatre. E1. Admission free. Tickets must be obtained by phoning Mrs Pam Smith, ext. 3450. Lecture repeated Thursday, September 15.

15: Paddy's Market — Arranged by Monash University Parents Group. 9.30 a.m. Union Building. Offers of goods (especially books) 25 8672, 277 4760, 580 2046.

16-17: Musical — "The Wizard of Oz", presented by Loreto Convent. Nightly at 8 p.m. Alex Theatre. Admission: adults \$3.50, students \$1.50. Bookings: 29 7609.

17: Concert — "Kaleidoscope '77" with Terry Camsey, presented by The Melbourne Staff Band. 8 p.m. RBH. Admission: adults \$2.50, students and pensioners \$1.

Saturday Club — "From Bach to Abba", with the Bennelong Trio. 2.30 p.m. Alex Theatre. Admission: adults \$2.50, children \$1.75.

18: Lectures — Four lectures on HSC politics. 9.30 a.m. RBH. Admission: \$2 per student. Bookings: Victorian Association of Social Studies Teachers, 59 Stanley Street, West Melbourne, 3003.

Indian Cultural Program — presented by the Monash Indian Association. A programme of Indian music, songs and dances. Indian delicacies will be available at intermission. 3 p.m. Alex Theatre. Admission.

19: Luncheon Concert — Chamber music by Student Ensembles including works for recorders, krumphorns and clarinets. 1.15 p.m. RBH. Admission free.

Migrant Studies Seminar — "The disadvantages and advantages of being a migrant in Australia", by Mrs Maria Pozos, Migrant Workers Centre; Mr George Zangolia, The Railways Union; Mr Des Storer, Centre for Urban Research and Action. 7.30 p.m. Rooms 245/250, Education Building. Admission free. Inquiries: ext. 2872.

Lecture — "Stability and change in education" by Prof. Richard Carlson, University of Oregon. Pres. by Monash Faculty of Education. 8 p.m. Lecture Theatre R4. Admission free. Inquiries: ext. 2805.

20: Concert — Dandenong Municipal Band with John Lidgerwood, The Melbourne Singers and the Melbourne Trumpet Triangle. 8 p.m. RBH. Admission: adults \$3, students and pensioners \$2.

Morning Coffee — Arranged by the Monash Women's Society. Guest speaker Mrs R. Brand, wife of the American Consul-General. 10 a.m.