Giant wind tunnel to help fight pollution

One of the largest wind tunnels outside North America will be built at Monash for research into getting rid of air pollutants from power stations.

Professor Melbourne said attempts had been made to simulate the appropriate conditions in the department's existing wind tunnel but a larger tunnel was needed.

In a submission to the Electricity Supply Association, the three academics involved in the project—Professor Melbourne, Dr. Deane Blackman and Associate Professor Jon Hinwood, said:

"Studies to determine the dispersion of buoyant atmospheric discharges from large sources such as power stations, in complex terrain where complex terrain or surrounding structures exist, require a very large wind tunnel working section—firstly to create a natural wind boundary layer, and secondly, to accommodate all the relevant features at a scale large enough to permit adequate scaling of the buoyancy effects.

"No such facilities exist in Australia to model these large scale situations."

The design incorporates "a very large open circuit wind tunnel arranged in such a way that the natural wind models developed over roughness elements in the first part of the working section can be passed over either topographical models of, for example, power station layouts for atmospheric dispersion studies."

The new building should be completed early next year, and the wind tunnel by the end of that year.

It is expected to have commercial application to the Australasian area.

Fesl masters long-dead language

Aboriginal languages in Victoria were deliberately and methodically destroyed by the scorn and ridicule of colonial Australia.

So says Mrs Eve Fesl, the first Aboriginal Masters graduate in linguistics, and the first Aboriginal Masters graduate at Monash, who has helped make amends for this by researching one of four extinct indigenous languages from Gippsland for her Masters thesis.

Her decision to research the language, Ganai, which was used in the Gippsland area, was given a boost by the interest of local Aboriginal people.

"I hoped the descendants of this language would be able to gain an idea of the Aboriginal world view, as told through the specific use of this language," said Ms Fesl, who is the director of the Aboriginal Research Centre.

An attempt was made to collect data which provided information on the semantics and use of Ganai, in the hope this would increase the knowledge of the language by triggering peoples' memories.

"I would never attempt to reconstruct a language, because the socio-historical events which may have changed the shape of the language are not known", she said.

Ms Fesl, who was awarded a Master's degree at an Arts graduation ceremony on June 4, plans to do her doctorate on policy and treatment in regard to Aboriginal and Islander languages.

She said this research would detail events leading up to the current situation in regard to recommendations for the National Language Policy.

The policy, recommended by the Senate Standing Committee in 1984 is presently being formulated and deals with the preservation of Aboriginal languages and their introduction into the school curriculum.

Ms Fesl recently organised a seminar at Monash for people concerned about the misconceptions of Aboriginal culture held by many non-Aboriginal people.

"There desperately needs to be public dissemination of accurate information if we are going to avoid exacerbating racial conflict," she said.

Those participating in the seminar included Mr. Alf Bamblett (Victorian Aboriginal Education Association), Dr. H.C. (Nugget) Coombs (former chairman of the Australian Council of Aboriginal Affairs), Mr. Al Grassby (special adviser in Community Relations, NSW Premier's Department), Ms Pat O'Shane (director, Department of Aboriginal Affairs), and the Victorian Attorney-General, Mr. Jim Kennan.

Participants agreed to ask the Federal Attorney-General, Mr. Lionel Bowen, to present the Racial Discrimination Act to the government for amendments which include penalty clauses for race defamation and incitement to racism.
Creating new pictures of tertiary study

Secondary students no longer equate education with dimly lit rooms governed by black robed masters sporting canes — or do they?
In an attempt to dispel any misconceptions, the Education Faculty ran a three-day workshop last month for art students from Mordialloc High School.

They attended the same tutorials and practical exercises as Diploma of Education students studying to become science teachers.

The visitors enjoyed a faculty barbecue, were given the opportunity to go on university tours, to air their views on education, and offer suggestions for better schooling conditions.

Organiser, Dr Jeffrey Northfield, a senior lecturer, said the decision to mix people from science backgrounds with those in humanities was a deliberate one.

"Science teachers seldom come in contact with humanities students, and humanities students have a notion that science people are exceptionally bright."

"We hoped some of the ideas these secondary students had about further education and its worth could be common to many technological innovations.

Others that spring to mind are nuclear power generation, photography, computer-assisted manufacture and food processing, to name a few."

The most appropriate way the faculty could help them develop a positive attitude towards post-secondary education was the Silver Jubilee project fund.

"The most appropriate way the faculty could spread the word was to involve students from outside the university," Dr Northfield said.

"In response, the visitors are planning to paint a large mural of their impressions of university life, which will be donated to the faculty."

Technology gains from blending of disciplines: Jones

Interdisciplinary thinking played a pivotal role in the development and implementation of technology, said the Minister for Science and Technology, Mr Barry Jones, at a Graduate School of Environmental Science seminar.

"A study in the United States showed the significance of interdisciplinary research to technological innovation."

One of the examples cited in the study was the video tape recorder, which was dependent on the merging of many streams of scientific and technological activity including control theory, magnetic recording materials, magnetic theory, electronics and frequency modulation.

Another innovation was the oral contraceptive pill.

In this example, contributing fields to the innovation were endocrinology, steriod chemistry and the physiology of reproduction.

This pattern of the bringing together of different fields of study to solve a problem is common to many technological innovations.

Others that spring to mind are nuclear power generation, photography, computer-assisted manufacture and food processing, to name a few.

The spin-offs of recombinant DNA technology are already having a major impact in medicine and lesser but rapidly growing effects on, for example, agriculture and veterinary science.

Some recent applications of this technology include:

- Isolation of the interferon genes and expression of these in cultured cells. Interferon produced in this way has only been marketed in the last 12 months and is used for treatment of individuals with some types of tumors.
- Diagnostic techniques which utilise recombinant DNA probes for direct analysis of genetic material from early human foetuses. Using this technology, it is now possible to detect previously undiagnosable genetic disorders in foetuses.
- Production of new plant varieties by direct injection of genetic material into cells, and regeneration of whole plants from the cells. This system has already been successful in trials with genes that confer drug resistance. In the future, it should be possible to introduce genes for pest or herbicide resistance into commercially-important plants.
- Development of new breeds of domestic animals by direct injection of new genes into fertilised eggs. Effective gathering of information is an obvious and crucial first step in interdisciplinary and all other thinking.
- Interdisciplinary or not, our capacity to draw together and analyse information is now enormous. This does not mean we can solve all our problems tomorrow with computers, of course. Because of their enormous impact, they have changed the rules; they have changed us to an "information society", with profound effect on our jobs, economy, and society as a whole.

We now analyse information and make decisions in a different framework as a result of the introduction of computers.

The challenge is to manage technologies and develop future technologies as our servants to achieve personal and community goals.

This requires an understanding, in the broadest terms, of the physical, biological and sociological aspects of our environment — interdisciplinary thinking on a macro scale.

Through the Australian Research Grants Scheme my department supports a major portion of Australia's basic research.

Perhaps it would be of benefit to develop a broader research support program which administers funds for a much wider spectrum of research than at present. Perhaps it could make special grants for interdisciplinary research.

Science and technology are now so complex that they present a major challenge in understanding them. The Parliament is no exception so I am pleased to announce that moves are almost completed to establish a Standing Committee on Science and Technology in the House of Representatives.

The Committee will enable the house to consider science and technology issues in much more detail than has been possible in the past.

Another initiative about which I am very excited is the Commission for the Future.

I established the commission in 1985 and presented it with the challenge of increasing public awareness and discussion about the future and how we might mould this future to achieve maximum benefit.}
Square wave machine finds world market

Technicians in the university’s Chemistry department have developed a high performance square wave generator which is being sought by laboratories worldwide.

Already the department has sold generators to research laboratories in West Germany, Italy and Canada, and it seems likely to get an order from Spain.

A product of pure research, the generator has become wholly an export item.

Designed for use in microwave spectroscopy, its performance far exceeds what is now available on the market and it enables whole new groups of molecules to be analysed.

Its development came about because the Chemistry department’s microwave spectroscopy group, headed by Professor Ron Brown and Dr Peter Godfrey, had been building molecules which could potentially occur in space.

The absorption of microwaves, however, is weak. Also, it varies according to the electric field in which molecules find themselves.

It turns out to be far easier to detect the change in absorption under a changing electric field than simply to measure the absorption itself. And that is where the square wave generator comes in.

Mains electricity in Australia comes as alternating current, the electric field at any one point varying constantly between positive and negative and back again in the form of a regular sine wave.

A square wave generator modifies that wave form so that there is an almost instantaneous change between full strength positive and full strength negative and back again. That makes it very much easier to detect the change of molecular absorption of microwaves.

In fact for microwave spectroscopy the variation used is between a zero-electric field and a highly positive field.

And in some cases, detection of molecules demands up to 3000 volts and tens of thousands of electric field reversals a second. Performances far in excess of typical equipment available commercially.

So the group needed a high performance square wave generator to enhance its ability to detect these molecular fingerprints, but could not afford to buy such equipment.

It had confidence, however, that Mr Ron Beach and his workshop staff could produce what was wanted.

The most important problem to overcome was the rapid switching rate required.

This was solved by using banks of fast electric silicon-chip-controlled rectifiers. As the only group in the Southern Hemisphere needing and using such equipment, the researchers were surprised at the level of interest shown overseas.

Compatible

Dr Godfrey said: “We’d be talking about our work at conferences and people would ask ‘How did you do it?’”

So about 18 months ago, the group wrote down the specifications of their equipment and began circulating it among their international colleagues. And the orders began to flow in.

The generators cost about $A7000 each and are customised to users’ needs. They can also be made compatible with existing equipment.

So far there has been little thought given to whether the generators could be produced on a commercial basis.

But square wave generators do have other applications. They are, for instance, an integral part of the motors used in the new Melbourne trams, and they also occur in some arc welders.

* The Vice-Chancellor, Professor Ray Martin, seals the box containing Monash Chemistry department’s first export model of the new square-wave generator, bound for Bologna, watched by Mr Peter Wade, Comptroller, Professor Ron Brown, and Mr Ron Beach, head of the department’s electronics lab. (Photo: Steve Morton). Below: Representations of ‘square-wave’ and ‘sine wave’.

Red Cross honor for Louis Waller

Professor Louis Waller, now back at Monash after three years as Law Reform Commissioner and another year as first chairman of the Law Reform Commission, has been awarded the Australian Red Cross Society’s highest honor — life membership.

In a citation for Professor Waller, the society said it was acknowledging his outstanding service as chairman of what has now become the society’s International Humanitarian Law Committee.

Professor Waller was a founding member of the Joint Australian Government and Red Cross Committee on the Dissemination of International Humanitarian Law, as well as being appointed Law Reform Commissioner for Victoria.

During his eight years with the Red Cross, he helped develop four teaching kits on humanitarian law.

The society said it was his energy and far-sightedness which helped the Australian Red Cross to become one of the most respected societies, in both the quality of its work and its dissemination of the code of the Geneva conventions.

The Red Cross gave special thanks to Monash for its co-operation in allowing Professor Waller to work from the university in the first five years of his appointment.

Greetings from Queensland

Monash University received special greetings from the University of Queensland for its 25th anniversary.

They came in a bound document signed by the Chancellor, Sir James Foots, and the Vice-Chancellor, Professor Brian Wilson, and read as follows:

“The University of Queensland offers congratulations to its sister university on the high academic standards attained in its first 25 years and on the national and international recognition achieved by its staff through their scholarship and research.”
'Tolerance a hallmark of student life'

In the light of recent events at this university, Monash Reporter presents guidelines set down by the Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom.

Mr Maurice Shack, chairman of the CVCP, said the guidelines were "forthright and unequivocal in support of freedom of speech and lawful assembly and of the importance to be attached to them." He said, "There is not at present a general or acute problem of disruptive or intimidatory conduct in universities. A small number of well-publicised incidents should be set against the dozens of orderly political meetings which take place each week on university premises up and down the land." He said, "Notwithstanding the provocative or intimidatory behavior but students must be able to protest as long as lawful freedom of speech and of assembly are not infringed."

"Mutual tolerance and freedom of argument are the hallmark of student life in the universities. "It is of great importance for the university authorities which have in the wider interests of society more generally." The Australian Vice-Chancellors' Committee recently distributed copies of the guidelines to all Australian universities.

Note: The following guidelines are based on a general overview of complicated and controversial questions of law. Universities must be ready to seek detailed legal advice on problem cases if they arise.

**General Principles**

Free speech and the right of assembly have fundamental importance for universities as places of education, learning, and the dissemination of truth. Universities have therefore a special responsibility to protect and advance them.

There is no absolute right under the laws of the United Kingdom to unfettered freedom of speech, nor are all forms of assembly lawful. Universities of their very nature ought always to lean in favour of extensive rather than restrictive interpretation of the legal scope of freedoms; subject to that, however, the duty of a university extends only to the protection of lawful forms of speech and lawful modes of assembly. A speaker who incites an audience to unlawful acts, whether or not directed to lawful purposes, by members of staff and students for the ordinary purposes of a university. Moreover, universities lack internal policing systems such as would enable them to act directly against substantial groups of persons bent on disruption either of their own ordinary purposes or of persons bent on disruption either of their own ordinary purposes or of persons bent on disruption in order to prevent any unlawful assembly.

Where student unions (and other like associations) are owners or tenants of the premises they occupy, it is they rather than the university authorities which have, in respect of these premises, the primary responsibility for securing freedom of speech and assembly and for preventing unfairness or disorder in the conduct of meetings. Universities should ensure that student unions exercise their functions in accordance with such fundamental responsibilities of the university as those in favour of freedom of speech and of lawful assembly. Where necessary universities should use their constitutional powers to bring this about.

Practical measures

(a) Universities should check their disciplinary codes to ensure that they make adequate provision to protect freedom of speech and of lawful assembly in the spirit of this document; and that provisions as to penalties are adequate.

(b) In respect of meetings in premises controlled by university authorities, the university authorities should permit the use of their premises only to organisers of meetings to undertake to, and who are reasonably likely to, comply with all lawful instructions issued by the university authorities in relation to the location, arrangement and conduct of such meetings, including adequate stewarding and the provision of adequate control over entry.

(c) It is essential that such arrangements be agreed in detail in cases in which it can reasonably be apprehended that there is a real possibility of disruption, or of some serious breakdown in good order. In such cases the university authorities should themselves, if appropriate, consult with the police. If the meeting is a public one, the police may be prepared to be present throughout to minimise the risk of disruption. At a private meeting this is much more problematic. When there is a known threat in public order in connection with any meeting, it may, therefore, be appropriate for the university authorities to secure that the meeting is held on such terms as will ensure that it is a public meeting in the legal sense.

(d) There should be provisions within universities whereby student unions or similar organisations, together with public bodies and other public bodies, may be called upon to provide advance notice to the university authorities of meetings to be addressed by visiting speakers, or visiting speakers of specified categories; in such cases clear advice should be given of any conditions or restrictions set by the university under (b) above.

(e) As an additional safeguard to ensure that university authorities can take reasonable steps to act against possible risks of disorder, it would be helpful if MPs and others prominent in public affairs would give university authorities adequate advance notice of any visit by such a person to address a meeting on university premises. Government Ministers have already given assurances that they will follow this procedure.

(f) Nevertheless, since university authorities lack the physical and the legal capability to maintain public order in extreme circumstances; and since the police are not always ready to intervene on private premises, there may be cases of very high risk when universities may have to use their right of refusing permission for the holding of violently controversial meetings on university premises, without regard to the character of the parties to the controversy.

Questions and penalties

Despite all reasonable precautions, and making all reasonable allowances for robust heckling in the traditions of democratic politics (and indeed of parliamentary debate), improper disruption of meetings and other infringement of free speech or other abuses of the right of assembly may occur.

Subject to this, where some breach of university disciplinary codes takes place in the disruption of a meeting, all reasonable steps should be taken to secure identification of persons committing offences and to press charges against them in accordance with the due process of the university disciplinary system.

China Exchange

Nanjing University and Monash have concluded an agreement which provides for exchanges not only of more than three months for staff or students from Victorian higher education institutions. People who choose a language course must have studied Chinese for two full years.

Applications close on July 30 with the Executive Secretary, Victorian Vice-Chancellors' Committee, 40 Park St, South Melbourne, 3205.

A detailed information leaflet is available from Deans and Assistant Registrars. Copies are from Mrs Barbara Linten, Registrar's Department (ext. 2091).

Monash University

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Freedom of speech, Monash-style: Students and others occupying the University Offices to protest about a financial crisis in the library system. Other people hold different views about the efficacy of this form of protest. See 'A fair go for staff as well', page 2. Photo — Tony Miller.
Offshore engineers discuss the local product

A recent workshop at Monash on offshore engineering stemmed from concern that Australian expertise had been under-utilised in developing our ocean resources, said Associate Professor Paul Grundy.

"The local suppliers and consultants have had little participation in an industry that will have a turnover of about $12 billion between now and the year 2000," he said.

"Offshore technology tends to be designed and developed overseas, but Australian conditions are unique. Australian consultants seem to get involved only when problems start to emerge — it's finger in the dyke stuff!"

The two-day workshop gathered together representatives from Government, research institutions and private enterprise.

It was co-sponsored by the Faculty of Engineering and the Victorian Department of Industry Technology and Resources, and organised by Associate Professor Grundy, Associate Professor Jon Hinekood and Mr Vechi Basharen from the department.

Associate Professor Grundy said that one likely result of the workshop would be the establishment of a national standing committee on offshore engineering.

"I've been impressed by how organised the Brits are and how well the Norwegians have done in really participating. Here, there is a glaring lack of a national strategy; we are not looking ahead!"

He said that part of the co-ordination problem was too many government departments and a division of responsibility between the Commonwealth and the States.

Nearly half the 65 workshop participants gave papers on topics ranging from the technical aspects of offshore development and oil recovery to government legislation and assistance. The need for the workshop was well documented by the heated debate aroused by one topic — how best to ensure opportunities in the industry for Australian suppliers.

The Victorian and West Australian Governments in particular have been putting considerable pressure on offshore development companies to buy Australian manufactured goods and services. But industry prefers to find its own suppliers.

Company executives, therefore, took great exception to a statement by the Director of the Victorian Government's Industrial Supplies Office, Mr Roy Lilley who said: "Every day some Australian manufacturers lose orders, not because their price is too high or their product is not of a high standard, but because some purchasing engineer or purchasing manager has written specifications of what to purchase in a way which ensures it will be imported rather than manufactured in Australia."

Representatives from Woodside Petroleum pointed out that they had had their fingers badly burned in attempting to comply with West Australian requests to use local manufacturers, paying up to half as much again as the import price for equipment.

Perhaps the most significant paper was delivered by Professor Val Pinczewski of the Centre for Petroleum Engineering at the University of New South Wales.

He pointed out that we are recovering on average less than one-third of the oil from the reserves we are tapping. To enhance that recovery is possible, but it requires research, he said.

That research needed to be done now to avoid oil supply problems by the year 2000.

"With our energies so exclusively directed to solving today's pressing problems, the long term questions will remain on the shelf unless the consultation process started at this workshop continues," said Associate Professor Grundy.

Goethe prize winner

The second Tom Roberts Lecture will be given by Jane Clark, curator of special exhibitions at the National Gallery of Victoria, in Richardson Dining Hall on Monday 21 July, in conjunction with the opening of the Oakleigh and Clayton Art Exhibition.

Ms Clark's lecture, titled The creation of a blockbuster: The Golden Summers exhibition, will begin at 8pm, following a special three course dinner in Deakin Hall.

Guests will later move to the Roberts Hall dining room, where Professor Margaret Plant of the Visual Arts department will open the first public exhibition of works of art from the combined collections of the City of Oakleigh and the Clayton Arts Council.

The exhibition will be open daily from 11am to 9pm, until Sunday 27 July, when it will be closed by the Mayor of Oakleigh at a public afternoon tea.

Bookings for the dinner (maximum 180) and lecture (200) can be made until 5pm on Wednesday 16 July, but will be processed strictly in order of receipt.

Invitations can be obtained by calling the Halls switchboard on ext. 2500 from 8.45am to 9pm weekdays, and from 9am to 9pm on Saturdays and Sundays.

Bioethics talk by Baroness

Baroness Mary Warnock, chairman of the British Inquiry into Human Fertilisation and Embryology which produced the 1984 Warnock Report, will speak at Monash this month as part of the 1986 Bioethics Luncheon Lecture Series.

The Baroness is Mistress of Girton College, Cambridge. Her talk, Morality and the Law: Some new problems, will be given on Wednesday 16 July in Lecture Theatre R2 (Rotunda) starting at 1.05 pm.

Another lecture will be given the following week by Richard Ball, Professor of Psychiatry at Melbourne University. Professor Ball will speak in Lecture Theatre R6 on Some ethical issues in psychiatric medicine.

Inquiries should be directed to Dr Helga Kuhse on ext. 3266.

JULY 2, 1986
You don't have to be crazy...

You had to be a good sport to enjoy the final event of last month's jubilee 25-athon — beer sculling and sausage gobbling.

But that was about as much as was required of your sporting abilities for this 25-event, almost-anything-goes contest.

Eight teams of eight competed in the finals for a trophy and a dinner at the Piano Bar restaurant, won by the Monash Athletics Club's team, the Phantoms. It was a hard road to victory with the wind and the rain adding to the perils for the 25 events, which including running on stilts, sack jumping, a human chariot race and a relay which required the passing of a very cold spoon between bare flesh and clothing.

More than 100 spectators were thoroughly entertained, and all competitors were compensated with the gift of a 25-athon T-shirt from the sponsors, the Tertiary Credit Union. The event was organised by Kerrin Fennessey as part of the Sports and Recreation Association's jubilee celebrations.

...but it certainly helps
Winners of the Primitive Primordial Pristine Cupreous Bridge Competition of 1986, from left, Phillip Black, Marcus Leonard and Richard Green. The contest was organised by Professor Noel Murray as an assignment for first year students in Civil Engineering.

Phillip, Marcus and Richard each received a $40 cash prize.

Their design was the lightest (63.8 grams) of the successful bridges, beating narrowly the entry from second prize winners, David Simpson and Rupert Rodrigues (65 grams).

These two groups were also co-winners of the Most Ingenious prize, awarded by visiting judge, Mr Milton Johnson, a consulting engineer.

Professor Murray said the winning bridge was made of single strands of copper wire which had been cold drawn and hand twisted, more than doubling their strength.

According to Richard Green (son of the Health Service director, Dr John Green) the three members of the winning team kept their construction methods a secret, and few of the 120 entries showed similar innovations.

Third prize went to Paultis Karos, David Kennedy and Edward Kelly, whose bridge weighed 70.2 grams.

An extra prize — Most Emotive bridge — was awarded to Christopher Alkemade, Andrew Glenk and Dietmar Jurgensen for their picturesque but heavy (138 grams) design, because it "was wonderful to look at", said Professor Murray.

The competition was the second organised by Professor Murray — the first was the Great Spaghetti Bridge Competition in 1985.

A third for the series has yet to be devised, but next year's new students are bound to be faced with some kind of unusual challenge.
The clay of Clayton, which every mention of the district conjures up for those who formed Monash, is uncompromising stuff.

Rock-hard when dry, clinging, buttery, puddled, when wet, it formed the bare grazing land of this hilltop, on which the O'Shea lived in what is now the vice-chancellor's house. From about the forum O'Shea lived in what is now the vice-grazing land of this hilltop, on which the pudding, when wet, it formed the bare landscape.

The grass and trees had reached an uneasy truce with the clay and wind, the elements having the upper hand. To disturb this balance, particularly in the sphere of drainage, by constructing a university was, as foreseen by O'Shea, inviting trouble.

The small group who gathered on the hilltop to make Monash thought of themselves as practical people with a big job to do and the skills with which to do it.

Looking back, we can see that they were also idealists who suddenly had the chance to remould the sorry scheme of things.

They evolved a vision of university grounds that would be a great collection of Australian native plants and, arising from that, a home for myriads of native birds. It would also be beautiful in a rich variety of ways — a restful haven — besides being all the necessary things such as a traffic way for 15,000 pedestrians, a place to play sports or eat your lunch.

There would be water and wilderness, and a reserve for native animals. Jock Marshall, founding professor of Zoology and the prime mover of this vision, inspired enough of his colleagues to prevail over their critics.

Quarantine

Here, sheltered from the wind and focused upon a fountain and a pond, grew up two very different, very attractive, gardens that encouraged our hopes. In the Engineering garden was realized an imaginative element of (the founding Vice-Chancellor, Sir Louis) Matheson's vision. As an engineer himself, starting a university that was then thought of first as a traffic way for 15,000 pedestrians, a place to play sports or eat your lunch.

Here Marshall's vision of a wilderness for animals and zoologists was realised. A small lake was essential. was admitted to dmit to the possession of this harmless tree and plant it with due ceremony in the Engineering garden.

The third early success grew secretly behind high fences in the valley below the Halls of Residence — Snake Gully. Here Marshall's vision of a wilderness for animals and zoologists was realised. A small lake was essential, was admitted to be feasible by the architects, and was made by damming the valley.

The existing native vegetation was thickened by plantings; kangaroos, emus, koalas were brought in; and the birds arrived as expected. The Marshall Reserve was, and remains, accessible only to the zoologists. The rest of us glimpsed the koalas in the tree tops.

Strict quarantine regulations prevented the importing of fruit trees, but he obtained seeds and passed them on to me to grow. I knew very well that apple trees are not propagated from seeds; indeed that varieties cannot be kept pure after the pollinations that form the seeds, but I did my best to germinate them.

After a decent interval I admitted failure and set about circumventing the bureaucracy. With the help of friends at the Plant Research Unit at Burnley, cuttings were obtained from the East Malling collection, grown in the quarantine glasshouses, and finally released to Monash without alerting the upper hierarchy.

With the passage of time we were able to dote upon the possession of this harmless tree and plant it with due ceremony in the Engineering garden.

The existing native vegetation was thickened by plantings; kangaroos, emus, koalas were brought in; and the birds arrived as expected. The Marshall Reserve was, and remains, accessible only to the zoologists. The rest of us glimpsed the koalas in the tree tops.

Meanwhile, in the open spaces managed by the Grounds Committee the planted trees continued to die. The forum was the most conspicuous failure.

The central circulation space through which we all passed several times a day, overlooked by the Union and the hundreds of rooms of the Menzies Building, the scene of vast gatherings of concerned students — the forum was an environmental disaster.

Treetless and flat, part grass and part uneven paving, it was an ordeal to cross in almost any weather.

The white concrete reflected the fierce sunlight, the rain lay in small lakes in the rain-guttering, the grass thrived in the shallow soil, and the wind tore round the corners of the Menzies Building and through the colonnade with such force that the swing doors became a serious danger and had to be replaced with mechanical sliding ones.

Present students must wonder at the permanent message on the central doors about a "High Wind Day".

The turning point was the appointment in 1966 of the first Curator of Grounds, Alan Wrigley. A thoroughly professional practical gardener, he set about changing the elemental forces of the hilltop.

He installed extensive drainage in the clay, and simultaneously recultivations of water supply; he re-designed the levels of the beer is still noisily to be the water ran away; he raised the planting areas above the general level, and diversified the prevailing flatness with more trees and undulations. Then he set about taming the wind.

Here, sheltered from the wind and focused upon a fountain and a pond, grew up two very different, very attractive, gardens that encouraged our hopes.

In the Engineering garden was realized an imaginative element of (the founding Vice-Chancellor, Sir Louis) Matheson's vision. As an engineer himself, starting a university that was then thought of first as a traffic way for 15,000 pedestrians, a place to play sports or eat your lunch.

Here Marshall's vision of a wilderness for animals and zoologists was realised. A small lake was essential, was admitted to be feasible by the architects, and was made by damming the valley.

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BLOOD PANCAKES
½ pint calf's or sheep's blood
1 pint beer or kally
1 egg
1 small onion
4 tablespoons barley flour
pinch mixed herbs
2 teaspoons salt
1 teaspoon cornflour
1 egg, beaten
melted butter

CLOUD EARS IN HOI SIN SAUCE
½ cup dried wood fungus*
2 teaspoons hoisin sauce (Singapore blend are best)
2 tablespoons light soy sauce
1 small clove garlic
1 teaspoon sesame oil
½ cup water
1 teaspoon cornflour
2 teaspoons peanut oil
1 teaspoon cold water

Baked Chicken with Fennel
Serves 4
4 whole cleaned and scaled fish, each about 500g (1 lb)
4 cups olive oil or melted butter
2 shallots
2 roots florentine fennel, with leaves
2 lemons
salt and freshly ground pepper
chopped parsley for decoration

Remove leaves from fennel roots and reserve. Cut roots into thick slices and blanch in boiling, salted water for 2 minutes, then drain and reserve. Lay fennel leaves on the bottom of a greased baking dish. Lay fish on fennel leaves and make 3 - 4 diagonal cuts across fish on both sides of fish. Remove pith and peel from lemons, sliced and insert slices into the cuts. Chop shallots finely and arrange around fish with fennel root slices. Pour oil over the fish, season with salt and pepper, and cover loosely with brown paper. Bake in moderate oven (180°C - 350°F) for about 1 hour or until fish is cooked, basting from time to time with the pan juices. Remove the brown paper for the last 15 minutes. Garnish with parsley and serve.

And lastly, something exceptionally appetising:

CHICKEN CURRY OF 200 ALMONDS
4 chickens
4 cups desicated coconut
2 onions, peeled, with cloves salt, pepper
200 almonds (1 lb)
30 chilli peppers
2 cloves garlic
2 tablespoons poppy seed
1 lb butter
2 cups tamariaded juice

Put half the coconut aside and use (he remainder to make coconut milk, i.e., take 2 cups of desicated coconut and add 1 cup of warm water. Leave for 20 mins and then sieve or squeeze through muslin. Boil the coconut milk in plenty of water with the clove-sploded onion.
Computing the costs for local government

A new book by Dr Michael Taylor, senior lecturer in Civil Engineering, and Dr Peter Newton, principal research scientist for the CSIRO, looks at the role and potential of microcomputers in local government. Dr Taylor discusses the problems facing local governments in the 1980s, when they are required to take on new roles and to supplement community services once provided by Federal or State bodies.

The very structure of, and interrelationships within, local government are under question, and the increased responsibilities must often be faced from a static or even diminishing resource base. The microcomputer and associated software represents a major means for local government to enhance productivity in the face of the growing demands upon its human and financial resources, and to enhance its capacity for innovative and responsive decision-making via information analysis and display, computer-aided design, interactive planning, graphics and other facilities.

Use of computers in local government is not a new phenomenon; per se a decade ago one in five municipalities in Australia owned a computer system, and a further one in five used a computer bureau service.

At that time computing was a central facility functionally linked to a limited array of financial-administrative activities and accessible only to a small elite within the EDP section. There is now a clear break with this earlier pattern.

Personal computers are appearing in sections and departments, allowing technical groups such as planners, engineers and building surveyors to use a growing range of analytical packages in their work.

Software, most of it original and developed in this country, has application in data management and display, strategic planning, human services planning, engineering, construction management and maintenance scheduling, and financial management and control.

In keeping with the general developments in computer and information technology, software applications continue to lag behind the developments in computer hardware.

To a large part, this is due to the difficulties for practitioners from disciplines outside the computer field to learn about the possibilities offered by the state-of-the-art in microcomputing.

Microcomputers for Local Government Planning and Management attempts to overcome this communications gap, by providing information for professionals in all fields with interests in local government activities.

It presents a range of newly developed microcomputer software of practical relevance to practitioners in local and state government, and for consulting firms which service them, as a means of reducing this lag.

Crucial area

It further provides educators and students in the longer as civil engineering, planning, architecture, environmental science, computer science, economics, geography, sociology and accounting insights into the structure and problems of contemporary local government, and the possible means offered by new information technology to tackle these problems.

The discussion also includes the potential for individual and organisational dislocation which may result from the rapid introduction of microcomputers into an organisation, and the possibilities for minimising these effects.

The supply of microcomputers in local government is a crucial area of concern.

To the extent that advice can be given in such a rapidly changing technological environment, attempts are made to define the criteria of interest when acquiring microcomputer equipment.

Methods and working models are outlined for accommodating the vast amounts of information pertaining to any local area, its population, housing, industry, infrastructure and services.

In a section on strategic planning, the focus is on the longer view required for area development and change (as opposed to statutory planning).

In this context a number of microcomputer-based procedures capable of providing insights into probable future scenarios are described.

The book also considers means by which human factors can be accommodated in planning — through awareness of changes occurring in the local and surrounding region, and through seeking information from the community.

It deals, too, with more traditional issues confronting local authorities.

These include the management of road traffic in local areas, quality and protection of the environment, construction of buildings and facilities, energy conservation and solar access.

Methods for waste collection and disposal are outlined, as are methods for evaluating community-wide impacts of new retail centres.

The final part provides speculations about the next generation of planning models and procedures, which are likely to incorporate aspects of computer artificial intelligence, in the context of computer-aided design and decision-making.

Microcomputers for local government planning and management is published by Hargreen Publishing Co., Melbourne.

* Professor Marvan, left, and Dr Marko Pawlyshyn.

JULY 2, 1986

Books

*Non-vocational* but very productive

In the face of a strong attack by the Federal Finance Ministry on "non-vocational courses such as Slavonic languages", the department of Slavic Languages has released three significant publications.

They include a special Monash edition of one of the two most important western academic journals of Ukrainian, the first western book on the Czech language to be published in Czech and a volume in English on Ukrainian settlement in Australia.

Monash scholars contributed almost all the papers in the Journal of Ukrainian Studies, Volume 10, Number 1.

In fact, the bulk of the journal was pre-edited by lecturer in Ukrainian, Dr Marko Pawlyshyn and Professor Jiří Marvan of Slavic Studies and sent off as a unit to the Canadian managing editor.

Dr Pawlyshyn said: "The reason we did it was to establish ourselves as a place where Ukrainian studies is taken seriously as an academic discipline.

"All of the academics in the department contributed, not just the Ukrainian scholars!"

A reviewer in the Times Literary Supplement said the journal "continues to maintain a high academic standard, broad coverage and relative impartiality!"

According to Professor Marvan, two scholars at Yale University found it difficult to believe he could write a whole book on one grammatical structure in Czech.

But that is exactly what he has done in Ceszke Stupnovani (Degrees of comparison in Czech).

The book is a study of Czech comparatives and superlatives as an example of a simple system of word inflection.

But Professor Marvan says it is much more than that.

MONASH REPORTER

* Peter Newton, left, and Michael Taylor.

* Professor Marvan, left, and Dr Marko Pawlyshyn.
There are no perfect methods

Not only does The Complete Guide to Contraception and Family Planning contain much information that would simply not have been available a decade ago, but it is presented in an uncomplicated style that might not have been possible then.

Co-authored by senior lecturer in Obstetrics and Gynaecology, Dr Gabor Kovacs and science and medicine writer, Ann Westmore, the book is an unemotive, non-moralistic, readable and up-to-date survey of the methods of contraception now available, how they work and their strengths and weaknesses.

It is a fine example of how a new generation of Australian writers is capable of putting science and technology into intelligible language.

The book makes a number of important points: There is no perfect method of contraception — each one has its cost in efficiency. The method best will vary between people and be different at different times. And the risk of pregnancy and childbirth still tend to be greater than any form of protection.

After a handy chart summarising the strengths and weaknesses of the readily available methods, the book begins with a number of case histories illustrating just how idiosyncratic contraceptive decisions can be.

Next comes a look at the male and female reproductive systems and then the survey of contraceptive methods divided into three categories — short-acting, medium-term and permanent.

Finally, there are chapters on how to decide which method to use, the social and legal implications, and likely developments in contraception.

Monash scholars have made a series of predictions which could rival Nostradamus. The predictions have been collected in a book called "Future 2090 (sound familiar?)" which deals with the future of education in Australian society.

Edited by Jenny Baldwin from the Careers and Appointments Service, and sponsored by BHP, the book introduces 36 professional disciplines.

Special attention is given to the challenge faced by people entering these professions.

The Minister for Science, Mr Barry Jones, who wrote a foreword to the book, said he was thrilled with the emphasis placed on disciplines which dealt with cultural enrichment and diversity, such as anthropology, visual arts, and language studies.

Doug Walters to visit club

Former Test Cricketer, Doug Walters, will be guest of honor at the University Club's Guest Night on Wednesday 23 July, between 5pm and 7pm.

The evening has been arranged in association with Bond Brewing, and members will have the opportunity of tasting 2.2 Light on tap. A snack cooked with beer will be served free-of-charge.

Summer in Britain

Students wishing to work and travel in Britain during the summer vacation can apply for work placement through the British Australia Vocational Exchange system.

Successful applicants must meet travel costs to Britain, work for eight weeks, and apply for work placement through the Britain Australia Vocational Exchange Office, by July 18.

Newman program

The Monash Newman Society's term two lecture series continues next Monday, with Father Patrick Laws speaking on the future of Catholic education.

The remainder of this month's program is as follows:

21: Morality for persons: Embryo experimentation and euthanasia. — Dr Norman Ford.

All lectures begin at 1.10 p.m. in R2 and admission is free.

More women for Rhodes

The Honorary Secretary of the Rhodes Scholarship Selection Committee for Victoria, Mr J.B. Potter, has urged academic staff to encourage more women to apply.

He said the scholarship was opened to women 10 years ago but some people could still be under the impression that it was restricted to men.

Since 1976 there have been three female Victorian Rhodes Scholars, the most recent being Lynne Sampson who won the scholarship last year.

"Women applicants are assessed in exactly the same way as men," Mr Potter said.

"They should be good all-rounders, with not only high academic achievements but also thoroughly involved in sport and community services!"

Application forms for the Rhodes Scholarship are available from April and may be lodged with the Registrar.

A Rhodes Scholar receives a personal allowance fixed by the trust.

In 1986-7 the allowance will be 4002 pounds a year. In addition all fees are paid directly to the Scholar's College at Oxford. The Rhodes Trust will also help successful candidates with their travelling expenses to Britain.

IMPORTANT DATES

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

5 Mid-year break for B.Juris and LL.B. ends.
7 Lectures in subjects and units taught in the first half-year (the faculties of Arts and Economics and Politics begin. Second teaching round begins, Dip.Ed. Second half-year topics in Mathematics begin. Second half-year begins for L.M. by coursework.
8 Publication of mid-year results - Law.
11 Publication of mid-year results - Education.
12 Second Term ends for Medicine VI (Prince Henry's Hospital students).
14 Second half-year begins for B.Ed., B.Sp.Ed., Dip.Ed.Psych. and M.Ed.St. Second half-year begins for Medicine VI. Last date for discontinuance of a subject or unit taught and assessed in Medicine III for it to be classified as discontinued. If a subject or unit is not discontinued by this date, it is not attempted or assignment work is not completed, it will be classified as FAILED. In exceptional circumstances the dean may approve the classification of a subject or unit as discontinued between 14 July and the end of the appropriate teaching period.
18 Last date for second half-year course subject/unit changes (excluding the Faculty of Education, and the faculties of Economics and Politics where the change follows the release of results in mid-year tests). After 18 July no student may take up a new subject or unit taught in the second half-year of the course, and no payment of a late change fee calculated at the rate of $5 for up to one week late; $10 for between one to two weeks late; $20 for more than two weeks late. Last date for discontinuance of all studies by not-for-degree, diploma, bachelor degree and Master preliminary candidates, and by Master candidates defined as coursework candidates, to be eligible for 50% refund of the 1986 Union Fees paid (not applicable to students taking Summer Term subjects).
19 Second Term ends for Medicine VI (Alfred Hospital students).
21 Third Term begins for Medicine VI (Prince Henry's Hospital students).
23 Closing date for change of course, subject or unit taught in the second half-year in the faculty of Education, and in Economics and Politics where the change follows the release of results in mid-year tests. Second teaching round ends. Dip.Ed.
The events listed below are open to the public. RBH throughout stands for Robert Blackwood Hall.

1. HISTORY & PHILOSOPHY OF SCIENCE LECTURES — "Museum of Victoria: Present and Future", by Dr Hayden Downey, Museum of Victoria. JULY 8: "Writing about Science", by Dr Rosalene Low, Swinhoe Institute of Tech. JULY 15: "History of Mechanical Computing", by Mr Trevor Clarke, CSIRO. All lectures at 8.15 p.m. Senior Common Room, Monash College. Admission free. Inquiries: ext. 3983.

2. ENVIRONMENTAL FORUM — "Environmental Public Educational Projects". RBH throughout stands for Robert Blackwood Hall.


4. ARTS & CRAFTS — "Weekend Workshops in Calligraphy (Int/Ad-vanced), Painting and Drawing, Pot-Pouri and Fragrant Gift Making", etc. For further information and free brochure, phone ext. 3180/3096.

5. EVENING CONCERT — "Musical Masterpieces", by the Zelman Memorial Orchestra. 7.30 p.m. RBH.


7. MONASH UNIVERSITY PARENTS GROUP — "Jubilee Art Exhibition and Sale. A unique opportunity to purchase and purchase the works of top Monash award-winning artists. 10 a.m.—8 p.m. Admission: adults $1, students 50c. Also July 20, 11 a.m.—4 p.m. RBH.

8. EVENING CONCERT — "Monash University Gamelan Orchestra. 8 p.m. RBH.

9. WINTER CONCERT — "A Grand Band", Crespon and Eltham Concert Bands with guest artists: David Ashton-Smith, Carole McKenzie and Peter Jerabek. Admission: $8, concession $4. Groups of 15 or more $4. 8 p.m. RBH.

10. EVENING CONCERT — "Monash University Gamelan Orchestra. 11.30 p.m. Admission free. RBH.

11. LEADER WESTERNPORT, (03) 560 5111