

ANU Reporter



Celebrating 60 years of university education in the ACT in 1990

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Review compliments IAS, recommends changes

The report of a team which recently reviewed the Institute of Advanced Studies has complimented the Institute on the 'outstanding' way it met its charter and its provision of 'advanced training at the highest international standard and in areas of national importance to Australia.'

However, in its report to the Minister for Higher Education and Employment Services, Mr Baldwin, the review team recommended changes to the Institute's administration, academic tenure, and links with other universities.

The committee headed by the former Governor-General Sir Ninian Stephen, recommended that the mission of the Institute be stated to include three functions: that it be a major performer in research, provide research education and training at the higher levels, and a resource for the highest education research system.

The committee's major recommendations are summarised below:

- That the University appoint a Director of the Institute reporting to the Vice-Chancellor;
- That Council appoint a high level Consultative Council to assist in the development of research priorities;
- That the Institute commit itself to a program of interaction with other Australian universities and that the cost of such a program, to be borne by the Institute, begin at five per cent of its operating budget and over seven years rise to 12 per cent of that budget;
- That the Institute's current system of tenured appointments be

phased out and replaced by a system of five yearly renewable appointments, dependent of quality of the appointee's research as reviewed by a senior committee;

- That senior women academics be encouraged to make short term visits to the Institute and efforts made to identify suitable women candidates for academic positions within the Institute;

- That the Government ask the National Board of Employment, Education and Training to review the methods of distributing Australian Postgraduate awards to ensure greater movement of students between universities for advanced training and that a mechanism be found to facilitate the greater mobility of students, one being the provision of relocation allowances;

- That the Government separately identify funding for the Institute within the Commonwealth Budget, and that the Government allocate a proportion of the Institute's budget on the basis of its postgraduate student load;

In relation to the John Curtin School of Medical Research, the committee recommended that:

- It become an Institute with its own governing body funded by the National health and Medical Research Council;
- That those of its research activities which would fit better within the scope of other Schools be moved to those schools;
- That it be affiliated with the ANU for academic purposes, that it retain its identity and location, and that it remain part of the academic community of the ANU;

- That the 1988 review of the John Curtin School provide the basis for identifying its weak areas of scientific research that should be discontinued.

- That the University immediately initiate discussions with the NH &MRC concerning this proposal and appoint a person to assist in the implementation of recommendations affecting the School.

Finally, the Committee recommended that the Government appoint a person to report on the implementation of the review and that the Institute be reviewed again in 10 years.

The University Council will receive the reviewers' report at its meeting today (Friday) and the advice from the Board of the Institute on it at its December meeting.

The Vice-Chancellor welcomed the report's recommendation for the continuation of the Institute's independent funding and its finding that the Institute could best perform its role as a constituent part of the ANU.

The Minister, Mr Baldwin, said the Government would give the report careful consideration and would seek the formal advice of the University and the Australian Research Council.

The review committee visited the ANU in July with the aim of examining the role and standing of the Institute in the Australian higher education and research system, including its role as a national research centre.

Other committee members were Dame Leonie Kramer, Dr Hugh Niall, Professor Donald Stokes, Professor Brian Wilson, Dr Michael Deeley, Professor Keith Hancock and Professor Max Brennan.

Draft report says ANU should lose Forestry

A draft report prepared by a Government sponsored committee has recommended that the University's Department of Forestry be relocated to the University of Queensland.

The Draft Report of the Government appointed Panel reviewing agricultural and related education in Australian higher education institutions, recommends that all 'mainstream' agricultural and related education in Australia be limited to six recognised providers.

The conclusion that the Department of Forestry at ANU be relocated was apparently based solely on the criterion of student load.

The head of the Department of Forestry, Professor David Griffin said that in coming to its conclusion, the Panel appeared to have taken no account of the undergraduate program in Natural Resource Management, including the recently instituted degree of BSc (Resources and Environmental Management).

Nor had it counted any postgraduate students or research work related to the agricultural sector undertaken outside the Department of Forestry.

Professor Griffin said the fact that the Department of Forestry was involved in a far greater educational activity related to the agricultural sector seemed to have been ignored by the panel.

He said the ANU would supply the panel with additional information to allow the tables in the draft Report to be revised to present the full range agriculture-related teaching and research undertaken by the University.

'In arriving at its key recommendations, the Panel also seems to have given no weight to such matters as international status, quality of educational offerings and the degree to which a department meets the demands of the relevant professions, employers and wider society,' Professor Griffin said.

'The University will contend that the criteria that the Panel has developed should be reviewed,' he said.

The Vice-Chancellor, Professor Laurie Nichol has asked Professor Griffin to coordinate the preparation of the University's response to the draft recommendations.

Former ANU rower wins at World Championship

A former ANU student is a member of a rowing team which won a silver medal in the the 1990 World Rowing Championships, finishing only half a boat length behind Canada in a closely contested finish at Lake Barrington last weekend.

Sally Ninham, daughter of Professor Barry Ninham, Head of the Department of Applied Mathematics in the Research School of Physical Sciences, rows with the Australian women's lightweight coxless four team. The team beat last year's world champion crew from China into third place.

Ms Ninham, who rowed for the ANU in Intersarsity events, said the team now will set their sights on a medal at the Barcelona Olympics in 1992.

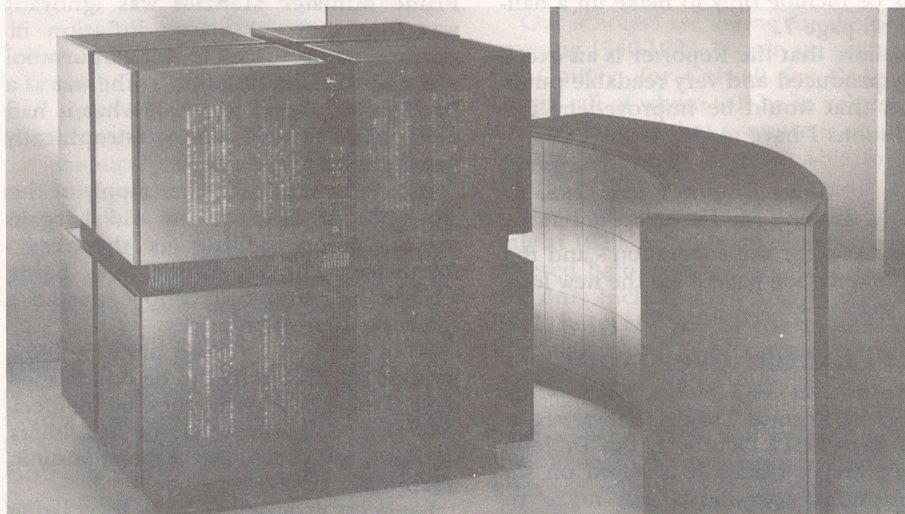
Australia's fastest supercomputer for ANU

The Federal Minister for Science and Technology, Mr Simon Crean, today (Friday) announced the Australian National University's acquisition of a supercomputer which is the fastest computer in Australia, and one of the first of its type to be sited outside the United States.

The Connection Machine System CM-2, a highly parallel supercomputer with over 64,000 processors, was designed and built by Thinking Machines Corporation of the United States.

The Director of the Australian National University's Centre for Information Science Research, Professor Michael McRobbie, said the CM-2's speed and versatility could completely transform fields such as artificial intelligence and gave the ANU's Parallel Computing Research Facility (PCRF) the most diverse resources in parallel computing in Australia.

'In fact, the ANU has collectively one of the most powerful centres for advanced computing outside the United States,' Professor McRobbie said.



'Complex computational tasks that would have taken days to complete can now be done in seconds,' he said.

The CM-2 can successfully address problems in real time spanning a large and diverse range of applications.

These include market research, medical imaging, oil reservoir simulation, stress analysis, seismic processing, modelling of high temperature superconductors, and computer animation.

The Deputy Vice-Chancellor, Professor Max Neutze says: 'We are amongst the few countries in the world with the opportunity to explore and develop this technology, which is vital if we are to be internationally competitive.'

The CM-2 will be on public display at the National Science and Technology Centre for three weeks.

— Marietta McGregor

Reading, self defence, and the 'System of Systems'

by David Brooks*

The study of the scientific method should begin with the study of narrative? Perhaps not, but certainly it should incorporate it.

The following was prepared as a *Why Study English* pamphlet for the ANU's Open Days, and is offered as a contribution to contemporary discussions of literacy and of the role and function of the Humanities more generally.

Reading

There are fifty distinctive definitions of the verb 'to read' in the O.E.D. The proliferation seems appropriate. It is only too clear, when you think about it, that there are many different kinds of reading.

What is also clear is that not many do think about it, let alone come to the conclusion that lies in wait beneath this welter of applications: that life is a process of reading - that, especially at this fag-end of the twentieth century, life and reading are practically synonymous.

From the moment we wake in the morning we are interpreting signs. Opening our eyes we determine, by the presence or absence of daylight, whether it is day or still night, whether the morning is advanced or just beginning, and from this moment on - in fact it has been going on even in dreams - we are interpreting signs from the world within or about us, reading it, as we must always do, in order to make our way through it. And it doesn't take much reflection to convince ourselves of a link between the ability to read, the ability to interpret signs, and our ability to make our way: the better we are at reading, it may well be, the better we are at surviving.

Comment

Reading, then can be seen to involve far more than words. But even if we restrict ourselves to words - even if we discount, say, the reading of weather, of faces, of gesture - the pressure to read is a constant in our lives. Even those who never read a book, if they have learnt to read at all, must read, in any urban environment, thousands upon thousands of words in a day: on product packaging, on street signs, on hoardings, on television advertisements, on the spines of books one may not even realize one is looking at.

But there is reading and reading. We may have to read whether we like to or not, but need we in this way become little more than the victims of the signs and languages and texts about us? Might we not, instead, learn to control and develop our reading, by employing one of the most complicated and yet, paradoxically, most pleasurable and easy to use of human inventions, the literary text?

Self Defence

The old arguments for the study of literature are looking a little stale. It's not that it doesn't refine our sensibilities; it's not that it doesn't exercise our moral sense; it's not that it doesn't rehearse us in all manner of human situations and help us to handle them the better when and if we encounter them; but anyone who rests their arguments for the study of literature on such points alone is living in the dark ages.

Stalin and Mussolini read literature avidly. So did Pol Pot. They all - at least potentially - had 'refined sensibilities'; they all had well-exercised moral senses;

they all had rehearsed all manner of human situations. It's just that they don't appear to have used them very consistently. Literature, in this sense, may have ennobling qualities, but it has no way of enforcing them. There may not be much actual proof of the story that certain commandants of concentration camps, after a day spent sorting those who were to live from those who were to die, would relax by listening to Wagner or by reading Goethe, but the fact that we find such a story so easy to believe surely says something, and it's not for the moral power of art. We all - to put this on another plane - know well-educated liberal humanists who are neither liberal nor particularly humane.

No. Surely there's some way of arguing for the significance of the study of languages or literatures without appealing quite so evidently to a moral fantasy. Stalin, Mussolini, Pol Pot, the directors of Hitler's death camps, none the less knew some things that such erstwhile defenders of literature have tended to underemphasise: that language is power; that language is something to be taken seriously; that literature, because it is language at its highest intensity, is one of the first places to go when you want to learn how to use it.

What, then am I saying? *'Here is power: come and grab it!'*? *'Every man his own Stalin!'*? *'Every woman her own Madam Wu!'*? Hardly. There is another side - the most important - to consider. The history of oppression is, amongst other things, the history of those who know the power of language over those who underestimate it. And the history of resistance, of independence, is also the history of language: of learning the nature and the power of it, of learning how it may be used and abused - of learning how to interpret, and criticise,

and counteract the things that are done with it.

The System of Systems

One of the central assertions of structuralist, as of much post-structuralist thought, is a thing called the linguistic metaphor: that language has provided the model for all other human systems - that it is, in effect the System of Systems.

Whether or not we accept this, it is clear that the study of language, as inevitably of literature itself, is also the study of system, and will help us to understand not only the nature and inherent perplexities of human systems, but also - since language determines so largely our relationship to what we deem 'reality', or whatever it is that is outside or beyond the human mind - to sharpen our sense of the things that are beyond all such systems, the sense in which every system, as system, must create its own Other, must limit, must hide as well as reveal.

Are the studies of language and literature then the studies of studies? I would hardly dare to suggest so. But their applications are far greater than is often realised, and other disciplines might do well to incorporate them.

To my mind the great failure in the 'defence' of the humanities generally, and of studies in language and literature in particular, has been in presenting simply, clearly, and in the terms of contemporary discourse, their relevance not only to other disciplines, but to the assumptions by which we study in the first place.

* Dr Brooks is a lecturer in the Department of English, The Faculties, an essayist and writer of fiction, and Editor of the Phoenix Review. His collection of essays, *The Necessary Jungle*, was published last month.

Letters to the Editor...

Live to cycle

Motorists think roads are only for cars and, with cycleways in urban Canberra, they get away with such thinking.

However on campus we share the roads. My advice for cyclists (on campus) is ride in the middle of the lane, so that cars can't overtake and are slowed down.

To motorists who take offence and blow their horns, or indicate their offence with raised fingers out of the window, wave warmly and yell out in a cheery voice 'Good morning'.

The car travelling up behind you at 60 km/hr is slowed to your speed of 30-40 km/hr.

You are safe because the car cannot overtake, especially if another car is coming the other way.

Paul Hutchinson

*Geophysical Fluid Dynamics
Research School of Earth Sciences*

Suggestion implemented

I suggest that the Academic Diary, Conferences, visitors and Awards section be put on the back page and printed in larger type.

These items are central to the University's activities and I believe that positioning them on the back page and making them easier to read will make the *ANU Reporter* both more 'reader friendly' and give greater prominence to key matters.

The Classifieds section is given too much prominence at present and detracts from the presentation of the University. I suggest that the accommodation section be retained, but that other items be included only to make up a half-page on page 7.

I believe that the Reporter is an excellently produced and very readable publication that would be improved by the suggestions I have made.

John Dargavel

*Senior Research Fellow Centre for
Resource and Environmental studies*

(Thank you for the suggestion - and the compliment. See page 8 for the new look back page - Ed.)

Trouble over wool

I have not yet read *Money, Markets and Empire* by Kosmos Tsokhas (reviewed in *ANU Reporter* 12 October), but Dr John Eddy's review claims it is based on the assumptions economists can make reliable forecasts; we have not suffered economically from being a colony of Britain; and it is possible for the producers of 4% of the world's textile fibres to exact a monopoly price five times as high as that of competitive fibres.

Dr Eddy says we limited sales to London and sought a market in Japan in the 1930s. Japan displaced Britain as our main supplier of textiles in the 1930s; to oblige Britain we limited imports of

Japanese textiles. Japan retaliated by boycotting our wool, depressing its price for 15 years and paving the way for synthetics.

In 1939 one of the things of which Prime Minister Menzies was ignorant was that there is always inflation in wartime, so he agreed to sell all our wool to Britain for the duration of the war at a fixed price, which was half what it had been in 1916 and was catastrophically low at the end of the war.

Britain bought two years supply of the stockpile in 1945 at the old bargain prices, before selling us the rest - fortunately for us, Britain was being advised by economists who expected a return to depression prices.

Wool reached a record price in 1950, because wardrobes had to be replenished after 6 years of scarcity; then by the decision of the US army to clothe its soldiers in wool, as protection against atomic weapons.

I suggest economists leave forecasting to historians, who do it so well after the event, and marketing to those who have had experience of markets, not of documents.

L.W. White
Deakin

Mr Ishio or...

Just a pedantic comment on a caption to a drawing that appears on p. 6 of the 28 September 1990 edition of the *ANU Reporter*.

According to the caption the drawing is a '19th century European lithographic copy of a Chinese drawing'. In fact the drawing is a Japanese drawing as is clear from the artist's inscription.

From the inscription we are able to identify the artist as Mr Ishio, or Ishifu, or Ishibu, or Iso, or Iwanasu, or Oshiko, or Oroshi, or Orosu, or Yuwanasu, depending on how his family chose to pronounce the two characters of the family surname.

John Makeham

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(Co-author of the book in question, *Mechanics of Pre-industrial Technology*, Dr Johan Kamminga, a Visiting Fellow in the department of Prehistory and Anthropology, The Faculties, says: 'While I have no expertise in ancient Chinese and Japanese script the evidence for the illustration being Chinese is good.

The lithograph first appeared in Tissandier's *La Mécanique de Chinois* (1889, vol. 17, page 152).

It was reproduced and discussed by Joseph Needham and Wang Ling in *Science and Civilisation in China* (1965, vol. 4, part 2, page 99).

Needham and Wang say that the "...caption copied uncertainly by European draftsmen seems to say 'drawn by Shih Sheng-Shih'".)

Seven QE II Fellows for ANU

Seven of the 15 prestigious Queen Elizabeth II Fellowships awarded by the Australian Research Council (ARC) for 1991 have gone to young scientists intending to the work at the ANU.

The new QEII Fellows will be working on a range of projects in plant and animal biology, chemistry and the earth sciences and are expected to take up their awards before July next year.

Dr John Bekkers will work on applying novel techniques he has developed for studying Long Term Potentiation in cell cultures to increase understanding of this phenomenon believed to underlie learning and memory. Dr Bekkers will work in the Division of Neuroscience, JCSMR.

One of the two women to win a Fellowship, Dr Donna Cohen, will be undertaking research on the mechanism of the regulation of gene expression with a particular interest in how cells use this in controlling responses to external stimuli.

Dr Cohen, currently at the Roche Institute of Molecular Biology, New Jersey, USA, will be working in the Division of Cell Biology of the John Curtin School of Medical Research.

Dr Robert Hill (RSES) will begin the detailed studies needed to tie geological events such as folding, faulting and mineralisation into a dynamic model for crustal reworking recently developed by a group of scientists at RSES.

Research in areas of photosynthesis in plants will be undertaken by Dr Graeme

Price and Dr Susanna von Caemmerer, both of Plant Environmental Biology, RSBS. Dr Price will work on the mechanisms by which cyanobacteria transport inorganic carbon within a cell and Dr Caemmerer will study the physiological and genetic basis of one photosynthetic pathway with the aim of helping to define processes which are amenable to genetic manipulation.

Dr Caemmerer has also been awarded an ARC grant to support this research.

Young, active volcanoes on the Pacific Ocean floor will be studied by Dr Jon Woodhead (RSES) to develop a better understanding of the relationship between heat transport within the inner Earth and surface phenomena such as catastrophic 'flood' basalt eruption, the development of continental drainage patterns and global mass extinctions.

The seventh Fellowship has been awarded to Dr Lim, currently at Harvard University, Boston, Massachusetts, USA, for a project in RSC.

This year's Fellowships build on the success of previous years with 4 being awarded in 1989 and six this year. The Fellowships carry an annual research support grant of \$10,500 and are widely regarded as the premier award in Australia for young researchers.

Also, the ANU was awarded 4 Australian Senior Research Fellowships, 3 Australian Research Fellowships and 8 Australian Postdoctoral Research Fellowships.

Prime Minister to launch latest from ADB



Photo: Peter Cotton

Dr Ritchie with the twelve volumes of the ADB.

ANU Scientist to deliver Mautner Lectures

Professor Ted Ringwood, Professor of Geochemistry at the Australian National University's Research School of Earth Sciences, has been invited to deliver the prestigious Alix G Mautner Memorial Lectures at the University of California, Los Angeles, on 14 and 15 November.



Professor Ringwood

His topic, *The Origin of the Earth-Moon System*, will consist of two lectures, *Planet Earth: in the beginning*, and *The Making of the Moon*.

The lectures are delivered biennially to a large audience by an internationally distinguished scientist still actively in the forefront of research.

Their purpose is the communication of important new developments in contemporary science to interested non-scientists.

Professor Ringwood will be the fifth scientist to deliver these lectures, following Nobel Laureates Professor Richard Feynman and Professor Paul Berg, Japan Prize winner Dr. Robert Gallo, and leading Soviet space scientist, Academician Roald Sagdeev.

The choice of Professor Ringwood reflects the stature of his researches over the past 30 years in the field of geochemistry, particularly in relation to the chemical compositions and internal structures of the Earth and Moon, and to the origins of these planetary bodies.

He is the author of 300 scientific papers and two books dealing with these and other areas of earth sciences.

The importance of Professor Ringwood's work in these fields has previously been recognised by the awards from several countries, including USA, UK, Germany, Russia, Canada, Australia and the European Economic Community.

Professor Ringwood has been invited to deliver his lectures as part of the Australian National University's public lecture program in 1991.

With the launch this week by Prime Minister Bob Hawke of Volume 12 of the *Australian Dictionary of Biography*, 24 years after the launch of Volume 1 by former Prime Minister, the late Sir Robert Menzies, the project as it was originally envisaged is completed.

But the General Editor of the *ADB*, Dr John Ritchie, and his deputy, Dr Chris Cunneen, do not see this as the end of their task.

After all, the completion of volume 12 only brings us to the year 1939, and as Dr Ritchie admits, there is already pressure from *ADB* readers, the publishers and the University to continue the work rather than to produce a revised edition.

'Our scholars are asking for the period covering 1940-1980. People are calling out for Chifley, for Calwell for Casey, for Curtin, all of whom will be in volume 13. And, so long as that pressure is on, there is little chance of us being able to do a revised edition.'

'Here we are in 1990 and the *ADB*'s only at 1939. Another 40 years have to be covered before we get to 1980 and that will only include men and women who died before 1980. People like Don Bradman won't be covered, nor Bob Hawke, nor Gough Whitlam.

'If only there was a fairy godmother to wave a magic wand and provide us with the money to do exciting new things like a revised edition or a concise edition of the *ADB*.'

With the current cost of the 12 volumes at about \$600, Dr Ritchie is concerned that the increase in the number of volumes of the *ADB* is placing it beyond the reach of ordinary people.

So the idea of one concise edition with 'boiled down' versions of the lives of those already contained in the present 12 volumes is already in the pipeline. It has the lure of appeal to a much wider market than that which presently subscribes.

Other spin-offs which form part of Dr Ritchie's vision, based though it may be on cold economic realities, incorporate the idea of specialist volumes. If the Ritchie vision becomes reality, there could be volumes on soldiers, women, pioneers, scientists, lawyers, doctors, or sportspeople.

Dr Ritchie would also like to see more younger scholars being recruited to write for the *ADB*. After all, he explained, 'since 1966, the *ADB* authors have been greying.'

'The only way for the *ADB* to become an organic entity is for younger people to be recruited into the ranks to replace those who are getting older and those who have died. That is one of the major tasks that lies ahead.'

'As the *ADB* comes closer to the present and there are more opportunities to get out into the field and to speak to those who knew the subject or are descendants, so it will be easier to personalize the entries,' Dr Ritchie said.

'I think the contrast with earlier volumes will be evident because it is good to find the person's private hobbies and interests outside his or her public work.'

Another change readers will find with future volumes will be the emergence of the use of adjectives.

'Douglas Pike, our founding editor, used to be hard on adjectives. Adjectives have made a reappearance, have been readmitted to the *ADB* under Ritchie,' commented Dr Chris Cunneen.

'When appropriate,' added Dr Ritchie wryly.

The past two and a half years since his appointment to the *ADB* have been ones of learning for Dr Ritchie.

'I had an awful lot to learn, far more than I had ever imagined,' he concluded - quite an admission for a scholar with a reputation for meticulously documented and researched work.

— Glenys Rogers

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Usefulness of carbon dating re-affirmed

Carbon dating, that reliable all-purpose workhorse for dating anything that once lived, had its usefulness reaffirmed at a recent ANU conference, the first to be held in Australia specifically on Quaternary dating.

The October workshop looked at dating by radiocarbon methods, thermoluminescence and electron spin resonance (ESR) techniques, and methods based on the decay of uranium series elements. Delegates discussed the relative merits of applying the different dating methods to human and environmental histories, and investigations of major phenomena such as climatic and sea-level changes.

Participants included researchers from the ANU and other Australian universities, scientists from Japan and New Zealand, and government scientists from the CSIRO Division of Water Resources and the Australian Nuclear Science and Technology Organisation (ANSTO).

Workshop convenor, Dr Richard Gillespie, of the Department of Biogeography and Geomorphology, Research School of Pacific Studies, said the workshop was organised because there have been enormous advances in dating technology over the past decade which have outpaced their application in the environmental sciences. The workshop focussed on three themes - extending the Quaternary palaeoenvironmental chronology beyond the radiocarbon range of about 50,000 years, calibration of radiocarbon results, and technical advances.

The primary concern was to establish Australian environmental history over the last two to three hundred thousand years. 'Humans have accelerated environmental change, and therefore it's very important we understand the historical process on a longer time scale,' Dr Gillespie said. 'We can use our knowledge of changes in the past 300,000 years to predict some of the consequences of Greenhouse warming. We also need to be able to assess the environmental impacts of new development - for example,

where radioactive mine tailings from a proposed uranium mine in Kakadu might end up and how long they'll stay there, and how sediment builds up in dams and waterways.'

Dr Gillespie said that since the invention of radiocarbon dating 40 years ago, it had become more precise, and in the hands of skilled practitioners could give quite accurate dates. About half of the radiocarbon work done in Australia related to archaeological studies, and the other half to environmental history.

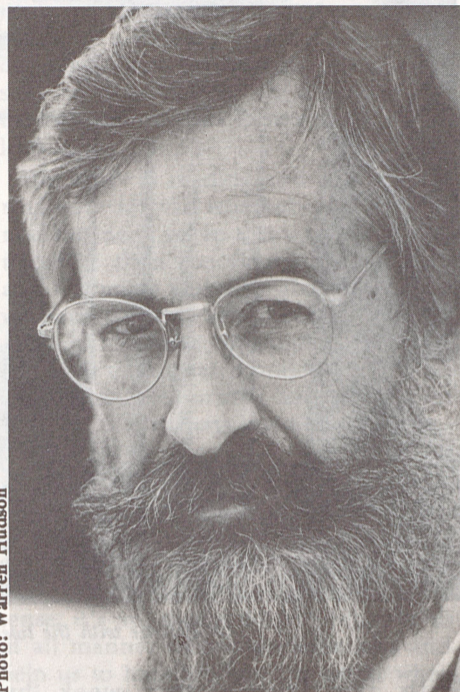


Photo: Warren Hudson

Dr Gillespie

The workshop covered aspects of dating of freshwater and marine shells, and the new measurement technique for radiocarbon dating using accelerator mass spectrometry (AMS). This method allows the dating of samples 1,000 times smaller than those previously possible, and consequently gives researchers a much wider choice of datable materials.

'The technology for radiocarbon dating now is well sorted out,' Dr Gillespie said,

'so emphasis has shifted to the chemistry, with the coalface at the moment being sample decontamination. We'd like to be able to measure only pure chemical compounds related directly to the event we wish to date, and AMS is giving us the means to develop new chemical processing methods'.

The workshop also looked at the technique of thermoluminescence (TL), applied mainly to quartz sand, for the dating of dunes and lake and river sediments. This method relies on measuring accumulated electrons in 'traps' which build up over time within the crystalline grains through the influence of radioactive elements such as uranium and thorium. When the trapped electrons are heated, they emit light - hence the name.

'Thermoluminescence was first used for dating ceramics often for authentication purposes. For this technique to work the 'atomic clock' needs to be reset to zero, and firing a pot does this very well, because it anneals out all pre-existing traps. With windblown sediments like sand dunes, sunlight has a similar effect,' Dr Gillespie said.

Electron spin resonance (ESR) also looks at trapped electrons, and is used for dating a wide range of inorganic materials including stalactites, coral, gypsum (a common mineral in sediments of semi-arid central Australia) and zircon. The ESR technique overlaps to some extent the applications of TL dating, providing researchers with alternative approaches to better chronology.

Dr Gillespie said that an important message from the workshop was that the different dating methods are now talking to each other. Results from the same sites are being compared, and the strengths of each technique are being demonstrated. Rather than competing, all the dating methods discussed are offering complementary information for the archaeological and environmental communities.

- Marietta McGregor

'The Science Shop'

Individuals or community groups who have a problem requiring scientific expertise now have access to the latest scientific research, through a service provided by 'The Science Shop' (previously the Wisenet Science Shop).

The Science Shop maintains a register of researchers from diverse scientific fields, who have indicated their willingness to be consulted on client's concerns.

Clients who contact The Science Shop are referred to the researcher/s most able to deal with their particular problem.

Consultants are predominantly drawn from fields in the natural and social sciences, such as community health, chemistry, biology, sociology, economics, law, physics and epidemiology.

Some of the issues raised to date have been: the environmental, social and economic impact of the Very Fast Train project; the effectiveness of various treatments for RSI (especially laser treatment); and the latest research and treatments for Alzheimer's disease.

Inquiries should be directed to Tom Wall, phone 249 3399, fax 249 5938.

Eating study

A postgraduate student in the Department of Psychology, Ms Michelle Karas, is seeking volunteers for a study on eating behaviour and eating problems in young women.

Ms Karas says the study is an attempt to study the relationship between events, reactions to events and their effect on eating patterns.

Volunteers for the study will be asked to fill out a series of questionnaires which take about one and a half hours to complete. Strict confidentiality will be maintained.

Two groups of women are being sought as volunteers: women aged between 18 and 30 years, who worry about gaining weight and who diet periodically; and women who binge eat and vomit afterwards, or use laxatives, and who are concerned about this practice.

Ms Karas said she would be happy to provide information on treatment options in Canberra to volunteers requiring it.

If you would like to take part in the study, call 249 0635 on Tuesdays, Thursdays or Fridays. A message can be left on 249 2795, at other times.

Crawford Prize

Applications for the 1990 J.G. Crawford Award close on 31 December 1990.

The Award is given each year to the author of a research paper considered by the Selection Panel to have made a considerable and original contribution to scholarship on Japan or on Australia-Japan relations.

To be eligible, the paper should be on either some aspect of the operation of the Japanese economy or economic policy, Japan's international relations or relations with Australia or the political environment affecting these affairs.

The paper should be typed, in English, 4,000-10,000 words in length with an 100 word synopsis. Five copies of the paper and synopsis must be submitted.

Papers published, written for publication or unpublished but written in the year of the Award are eligible.

The value of the Award is determined each year by the judging panel and in recent years has been \$2,000.

Applications for the Award are due 30 October, 1991. Inquiries to Kim Houghton, on ext 5540.

Woman with a mission

Kristalina Georgieva is a woman with a mission - the mission is to inform the West of the extent of the problems being experienced in her native Bulgaria and other Eastern bloc countries and to soak up as much information about market economies as possible to cope with the changes resulting from 'Perestroika'.

Dr Georgieva spent a month at the University of the South Pacific and will be at the ANU until the end of October as a Research Fellow. She is collecting information on the Pacific region and the workings of market economies.

A Professor of Economics at the Sofia Higher Institute of Economics, Dr Georgieva lectures on capitalism and will set up new courses on international economics and comparative economic systems when she returns to Bulgaria.

Dr Georgieva is a product of the new openness and self-criticism creeping into East European society.

She expressed her concerns about 'Perestroika', about the failure of communism and the role played by Soviet President, Mikhail Gorbachev.

Although she believes Soviet President, Gorbachev, is the 'most important man of this century', she does not consider his reforms far-reaching enough. However she concedes that he has played a significant role in freeing up East European society.

'Gorbachev did not come to change the world. The world needed change and then the man came. Gorbachev was a product of this far-going necessity for change. He unlocked the door which would otherwise have been broken down.'



Photo: Peter Cotton

Dr Georgieva

But Dr Georgieva believes President Gorbachev has played his role and Eastern Europe needs a new leader. President Gorbachev, she said, did what he was supposed to do but is now hamstrung by his own philosophy.

However, she is the first to admit there is no-one who could replace the Soviet President at the moment or could unite the communist party in the same way.

Dr Georgieva believes the West has overestimated the level of change in Eastern Europe. She argues that some countries such as the USSR, Bulgaria and Romania are still trying to reform socialism from inside, trying to save the institutional basis of socialism and 'because of that are not making enough progress' while others - what she calls the westernisation countries - are really changing dramatically.

'In 5 years, the whole of Eastern Europe has changed more than the USSR and the USSR was supposed to be the leader in the field of reforms,' Dr Georgieva said. — Glenys Rogers

ARC grants total \$2.8 million...

Faculty members at the ANU will get just over \$2.8 million from the Australian Research Council for projects in 1991, of which \$2.3 million is for Large Grants, and approximately \$0.5 million has been allocated for 'small' ARC grants.

The success rate for large ARC applications this year was 63.3%, compared with a success rate of 49.4% last year.

The funds will be used over a number of areas within the Faculties of Science, Arts, Asian Studies and Economics and Commerce.

The Regolith Centre is to get two continuing grants as well as a new grant for a study by Dr Richard Eggleton, in collaboration with Dr Tony Taylor of the University of Canberra, to look at the potential use of kaolinite in mining and soil fertilisation.

Dr Dayal Wickramasinghe, of the Mathematics Research Section, The Faculties, has received a new grant to undertake further research into an important frontier in stellar astrophysics. Dr Wickramasinghe will use the grant to study the properties and evolution of magnetic white dwarf stars in binary systems.

Research which will enable more accurate genetic selection or manipulation

for improved plant cultivars being undertaken by Dr David Day, (Botany, The Faculties) has been given a boost with the award of a continuing grant as well as a major grant. The work will be undertaken in collaboration with Dr Murray Badger (RSBS) and Associate Professor Wiskich (University of Adelaide).

Further study to advance understanding of Australian prehistory and environmental science as well as the science of dating will receive a boost as a result of the award of a grant to Professor Isabel McBride (Prehistory and Anthropology, The Faculties). She will use the grant to undertake a collaborative study with Dr Richard Gillespie of Biogeography and Geomorphology and Mr John Head of the Radiocarbon Dating Unit (RSPacS). They will be using new techniques in radiocarbon dating and soil chemistry to resolve long-standing problems in dating Pleistocene archaeological sites in the Willandra Lakes World Heritage area.

Research expected to have medically-important implications for humans is to be undertaken as a result of a grant awarded to Dr Antony Howells (Biochemistry, The Faculties) in collaboration with Dr Graeme Cox (JCSMR) to study how substances move through cell wall membranes.

Drs Michael Papazoglou, Victoria Peterson and John Smith (Computer Science, The Faculties) have received a new grant to design an integrated information system which will provide



Photo: Dragi Markovic

Professor McBride

access to many other related but stand-alone information databases without affecting the use of individual systems.

Researchers at the University have been awarded 10 other new grants with three further grants, including one new

grant, being awarded to Emeritus Professors Reginald De Bray, Donald Walker and Noel Butlin.

New grants were also awarded to Dr Allan Baxter (Physics), Professor Eric Bachelard (Forestry), Dr John Elix (Chemistry), Dr David Ellis (Geology), Dr Sasha Grishin (Art History), Drs Arthur Houwing and David Bone and Professor Ronald Sandeman (Physics), Professor Beryl Rawson (Classics) in collaboration with Professor Weaver and Dr Gallivan (University of Tasmania), Dr Baas Terweil, Anthony Dillar and Christopher Eade (Asian Studies), Professor Neil Trudinger and Drs Gehard Huisken and John Hutchinson (Mathematics), and Dr Susanne von Caemmerer (RSBS).

Big Awards went to Professor Michael Barber (Mathematics), Professor Ken Campbell and Dr Richard Barwick (Geology), Dr Bruce Chappell (Geology), Professor Robert Dixon (Linguistics), Drs Louise Hercus and Harold Koch (Asian Studies) and Professor Ronald Sandeman and Drs Hans Bachor and David McClelland (Physics).

Professor Peter Hall (Statistics) together with two colleagues, and Professor John Warren-Wilson (Botany) were both awarded 2 grants each.

...And ANU submits 15 CRC proposals

The Australian National University has submitted 15 proposals for new Cooperative Research Centres in the first round of submissions in response to an initiative by the Prime Minister's Science Council to establish 50 such Centres in Australia in 1991.

A coordinator of the ANU's proposals, Dr Robert Hill, said the aim of the centres was to bring together scientists from a variety of government and industry research laboratories to work collaboratively on projects of national importance.

Dr Hill said that when fully established in five years time, the Scheme, to be administered by the Office of the Chief Scientist, would have a budget of \$100 million, support about 50 Centres and provide as many as 1,000 new scientific jobs.

The Vice-Chancellor, Professor Laurie Nichol, said the level of support for the program among ANU researchers could be gauged from the number of proposals with ANU involvement.

'The University has seized the opportunity presented by the Scheme to explore partnerships with researchers in other institutions in developing important new thrusts in the areas of materials science and physical sciences, agricultural and environmental resource management, and computing and simulation.

'In all of these areas, considerable emphasis has been placed on research training of varying kinds. The formation of the Graduate School enables the University to make available a unique pool of expertise, which would in turn be enriched by the addition of supervisors from our collaborating partners in the CSIRO and other institutions'.

The Vice-Chancellor said the level of commitment to the Centres from companies was 'exciting' and the Centres had the potential to rapidly increase the links between industry and university researchers.

Professor Nichol said the level of participation by scientists from The Faculties was also pleasing. All but two of the 15 proposals included contributions

from The Faculties, with three resulting largely from the initiatives of Faculties-based researchers.

Environmental and Life Sciences

The proposed Centre for Australian Palaeobiology aims to study the palaeo-history of Australia's flora and fauna and climate. ANU sponsors are the Departments of Geology and Zoology, and the Research School of Pacific Studies. The Centre is also sponsored by the Bureau of Mineral Resources (BMR) and the National Museum of Australia.

The proposed National Centre for Biological Control of Vertebrate Populations intends to study fertility control methods in populations of feral animals. Partners are the Departments of Biochemistry and Molecular Biology (ANU); the Division of Wildlife and Ecology (CSIRO); the University of Wollongong; and the Department of Conservation and Land Management and the Agriculture Protection Board, both of WA.

The proposed Plant Science Centre aims to research themes including plant breeding and growth processes, microbe-plant interactions, and environmental and agricultural management. The Centre is sponsored by the Research School of Biological Sciences (RSBS), the ANU's Department of Botany, the Division of Plant Industry (CSIRO) and the company Biosem Pacific.

The mission statement for the proposed Centre for Ecology of Biotic Resources is to develop sound scientific bases for the management of Australia's living resources in order to promote ecological sustainability. Sponsors are RSBS, the Departments of Botany and Zoology, the Centre for Resource and Environmental Studies (CRES), and CSIRO's Divisions of Wildlife and Ecology, Plant Industry and Entomology.

The proposed Centre for Integrated Resource Management and Environmental Science will take a holistic approach to the development of a new framework for Total Environmental Analysis. ANU sponsors are CRES and the School of Resource and Environmental Management. Other

sponsors are: CSIRO's Divisions of Information technology, Soils, Environmental Mechanics and Water Resources; and the National Resource Information Centre (NRIC in the Department of Primary Industries and Energy).

The proposed National Centre for Insect Systematics has as its aim the enhancement of our knowledge of Australia's insects. It is sponsored by the Department of Zoology, CSIRO's Division of Entomology, the Biological and Chemical Research Institute and the Australian Museum.

Minerals and Earth Sciences

The Centre for Cooperative Research and Training in Solid Earth Geophysics aims to develop methods for extracting three-dimensional images from beneath the Earth's surface and using observations for geodynamic modelling of Earth processes. Partners are the Research School of Earth Sciences (ANU), BMR, and the Victorian Institute for Earth and Planetary Sciences (VIEPS).

The proposed National Centre for Seabed Resources and Processes has the aim to conduct research and develop new exploration technologies for non-hydrocarbon mineral resources on the continental shelf. The proposed Centre is sponsored by the ANU's Department of Geology and the Research School of Earth Sciences (RSES), the BMR, the Oceanic Sciences Institute (Sydney University), the NSW Geological Survey and the NSW Government.

Computing and Simulation

The proposed Centre for Innovative Applications of Advanced Computational Systems aims to establish an internationally recognised centre for research in advanced computing technologies. It is sponsored by the Department of Computer Science, School of Mathematical Sciences, Computer Sciences Laboratory, Automated Reasoning Project, Supercomputer Facility, the Parallel Computing Research Facility and Australian Centre for the Arts and Technology (all ANU) and Information Technology (CSIRO).

The Centre for Robust and Adaptive

Systems is to conduct research on signal processing and control systems of direct industrial benefit. The Centre is sponsored by the Department of Systems Engineering, the Research School of Physical Sciences (RSPHYS) and the Interdisciplinary Engineering Program (both ANU); CSIRO's Division of Radiophysics; Defence Science and Technical Organisation (DSTO); and BHP's Melbourne research laboratories.

The proposed Centre for Human Computer Interaction is to develop a model for Human Computer Interaction. The Centre is sponsored by ANU Departments of Psychology and Linguistics (The Faculties) and the Computer Sciences Laboratory (RSPHYS), IBM, DSTO, Digital Electronics Corporation (DEC), Computer Power and the Australian Defence Force Academy (ADFA).

Material Sciences and Physical Sciences

The Centre for Interfacial Science is sponsored by the RSPHYS, and the ANU Departments of Chemistry, Biochemistry, Molecular Biology and Engineering; Division of Chemicals and Polymers (CSIRO); Aeronautical Research Laboratories (DSTO); and ICI (Australia) Automotive and Detergents Division. The Centre's approach will be to apply understanding of surface physics and chemistry to identified problems such as minerals separation, soil stability, and cold-metal alloying.

The proposed Australian International Gravitational Research Centre, which is sponsored by the Department of Physics and Theoretical Physics (ANU), the Australian Defence Force Academy, the University of WA, the WA Government, BHP, foreign universities and a number of companies, will aim to prove the technologies that would be used in the construction of an Australian link in an international gravitational wave network.

The Centre for Applications of Accelerator Mass Spectrometry is sponsored by the Radiocarbon Laboratory of RSPacS, ANSTO, CSIRO and other universities and aims to develop applications for AMS for user groups.

Sisters are doing it, in suits

Sisters in Suits. Women and Public Policy in Australia

Marian Sawyer 1990 Allen & Unwin, \$19.95.

by Christobel Young*

For someone who was not formally involved in the feminist movement or the Women's Electoral Lobby, this book was a revelation of the inroads made by 'femocrats' (a term invented in Australia) into government policy-making relating to women over the past 20 years.

Women's liberation arrived in Australia in 1969, and the Womens Electoral Lobby (WEL) was formed in 1972. It was perhaps not so surprising to discover that many of the 'femocrats' were in fact recruited from WEL.

I was impressed by the meticulous recording of dates, names, committees, events and procedures. The book is also based on interviews with many of the key women, particularly in what is now the Office of Status of Women. Accordingly, a lot of the story relates to the roles of individual women, and the way in which their personal strength or own particular style shaped the way in which they responded to the challenge. Many of these women had to contend with opposition from many fronts: from anti-feminist groups, from misunderstanding and criticism from the women's movement itself, from highly conservative politicians, from the media, and from government bureaucracy.

Marian Sawyer has produced a well-written and well-researched book, with a full and fast-moving account of the efforts of the dedicated, intelligent and determined women to improve the status and opportunities of all women in Australia.

Many advances have been achieved during the 20 years in areas such as the minimum adult female wage, child care, women's refuges, sex discrimination, and the introduction of the Women's Budget Program, in which government departments were required to describe the way in which their policies affected women.

Nevertheless Australia has still some way to go in achieving equity for women, and there have been some disappointing setbacks. Marian Sawyer has some perceptive criticism about the introduction of means-testing of the family allowance in Australia in 1985-87, describing this as 'a major symbolic defeat for the Australian women's movement' (p.99). 'Family allowances, which had been paid to the primary carer regardless of her workforce status, had historically been viewed as the most effective means of recognising the costs of raising children' (p.98).

Although critics had labelled the family allowance as 'middle-class welfare', Sawyer notes that 'there was special anger among women that the same hue and cry was never raised over the Dependent Spouse Rebate (DSR), which was granted to men, regardless of how wealthy, and regardless of whether they had children' (p.99).

Economists also come in for some special criticism. She refers to the detrimental effect of the incursion into the public



Dr Sawyer

service of the new generation of economists, trained in the 'gender-blind individualism of neoclassical economics' and 'convinced of the value of free-market solutions to policy issues - solutions which were usually directly detrimental to women's interests' (p.105). Also with regard to the initiative of the Women's Budget Program she notes that the 'economic departments are still notable for their resistance to disaggregative analyses' (p. 231).

Dr Sawyer expresses concern at the 'retreat' by both major parties in recent years from the Equal Employment Opportunity (EEO) initiatives, and a de-

clining commitment to social reform. It is also disturbing to read of the stale arguments of several politicians that employment equity for women constitutes a threat to the family and to society.

The politics of dress is a fascinating side issue in the book. At first 'casual dress was seen as a symbolic rejection of the preceding 23 years of conservative government' (p. 27), but from the 1980s, a 'sisters in suits' conformity among 'femocrats' emerged, with a recognition of the positive power of 'dressing for success'.

Differing views about appropriate dress styles initially caused some tension between the women's movement and the 'femocrats', but in time it became accepted it was possible to be both feminine and a feminist.

The book also documents the development of policy machinery at the State level, and reveals the wide variation between States, including the remark of one State Premier, who believed that, since he had a wife, he did not need a Woman's Advisor in government.

Again the impression is that progress has been achieved very much through the commitment, drive and personal strength of several key women, but also facilitated by politicians with insight and perception.

The women who have played key roles in the fight for equity for women, and the politicians and bureaucrats who have supported them, should feel proud that their efforts and achievements have been reported and acknowledged in this important study.

* Dr Young is a Senior Research Fellow in the Department of Demography, Research School of Social Sciences

'A picture is worth...'



Rottneest Gulls by Sue Ferrari

According to an old Chinese proverb, 'A picture is worth more than ten thousand words'.

The upcoming annual exhibition and auction of photographic works by community photographic centre, PhotoAccess, will be a test of the truth of that proverb.

The exhibition includes a slice of life in China during the 1930's, the Tiwi People on Bathurst and Melville Islands and of some of the peoples of Asia and the Pacific.

Well-known photographers represented in the display include Hedda Morrison, Heide Smith, Dennis

O'Rourke and Alanna Harris, as well as works by many other interstate and local photographers.

The Fireplace Room in Gorman House will be the venue for the exhibition to be officially opened on Saturday 3 November at 1pm by Kate Davidson, Curator of Photography at the Australian National Gallery. The exhibition will then continue on weekdays between 10am and 7pm and on weekends between 10am and 4pm.

All the works will then be auctioned in the Bogong Theatre at Gorman House at 1pm on Saturday 10 November. Bar facilities and refreshments will be available.

Autumn Sunset

by R.G.A de Bray*

I sit in my study
 Listening to a sad, serial, Japanese tune,
 Played on a violin and piano,
 And watch the purple edges of the thin cirrus clouds
 Fade away, like the sad tune.
 The light fades
 And the blackbirds chirrup their last songs.
 Lights light up in distant windows across the valley.
 But now the highest clouds in the west
 Glow again a brilliant flamingo pink,
 And the evening star shines like a diamond
 Between the fleecy strands of a grey mist
 The traffic from town sings on its restless song.
 The big oak grows black against the shining windows
 Of a tall block, with rows of lights like a Christmas tree.
 A dog barks,
 And the clear sky goes a deep blue,
 A deep, deep blue, deep blue...
 The brief, fine late-autumn day is over.

R.G.A. de Bray is Emeritus Professor of Russian and Former Head of the Department of Slavonic Languages at the ANU. The author of Guide to Slavonic Languages, he has published collections of translations of Serbian and Macedonian poets, and is currently working on the production of a Macedonian - English dictionary. Poetry for ANU Reporter should be submitted to Dr David Brooks, Department of English, The Faculties.

