Many biologists insist that true science must involve controlled experimentation and rigorous statistical hypothesis-testing.

But many of the answers to important environmental questions cannot be found by means of such experiments. Either they are too expensive, too time-consuming or simply impossible.

Therefore, environmental science must embrace other types of research, that do not require the kinds and amounts of data that cannot realistically be obtained.

Natural history - or non-qualitative biology - can play a vital role here.

People who still 'live off the land' - subsistence farmers, fishermen and hunters, are among the world's finest natural historians; they have had to be in order to survive.

Dr Bob Johannes, in delivering the Allan Sefton Memorial Lecture on Thursday 19 September, will discuss how their knowledge is providing valuable practical environmental knowledge unknown to science.

The lecture, entitled 'What environmental science doesn't deliver and how natural history can help', will be delivered in the Union Function Centre, University of Wollongong.

Dr Johannes is an eminent marine biologist who is a world authority on the use of traditional knowledge in the management of marine natural resources.

He obtained BSc (1958) and MSc (1959) degrees from the University of British Columbia, and a PhD from the University of Hawaii in 1963.

He was on the faculty of the University of Georgia, 1969-1976, where he worked with the famous marine biologist E.J. Ferguson Wood.

Fascinated by the immense marine knowledge of traditional fishermen, he spent 16 months in 1974-5 living and working with the outstanding fishermen of Palau, researching and recording much of their expert knowledge.


After a period at the Hawaii Institute of Marine Biology, he came to Australia in 1979 to work as Principal Research Scientist, CSIRO Division of Fisheries and Oceanography, Marmion, Western Australia.

In 1985 he moved to the CSIRO Division of Fisheries and Oceanography, Hobart, Tasmania, as Senior Principal Research Scientist, where he stayed until 1993.


In addition to being an author of 100 research papers and numerous reports, he has written two books, *Words of the Lagoon* and *Traditional Fishing in the Torres Strait Islands* (1991, co-authored by W. MacFarlane).

He has also edited several major volumes on traditional environmental knowledge.

He retired from CSIRO in 1993, but has continued working on the development of improved marine environmental management systems.

One of his most important recent pieces of work has been an investigation of the live fish trade in Asia and the Pacific.

This resulted in a major report for The Nature Conservancy and the Forum Fisheries Agency (Johannes, Robert E. and Michael Riepen. 1995. *Environmental, economic and social implications of the live reeffish trade in Asia and the Western Pacific*) which has received wide international recognition, including the front page of the New York Times, CNN news, four pages in Time magazine, and wide coverage in Australian and Asian papers.
A Review of Financial Devolution was conducted from May to July 1995.

The review team, chaired by Deputy Vice-Chancellor Professor Peter Robinson, followed a continuous improvement problem solving methodology, formulating a problem statement then following up with data collection and analysis.

Of the 49 interviews conducted across campus, five deans, five unit heads and 15 administrative staff stated that they felt 'less than confident they understood the University's financial systems'.

As a result, one of the three recommendations of the Devolution Review was to design and provide training in the University's financial and budgetary matters, specifically for deans, unit managers and their assistants, and faculty and faculty finance officers.

An e-mail invitation was issued for volunteers to join the Financial Management Working Party.

General staff in several faculties expressed interest and were joined by Finance Director, Susan Smith, and two Finance staff, as well as Pam Piela and Amanda Howard from Personnel Services.

Lecturer from the Department of Accounting and Finance, Mr Greg Laing, also agreed to join the group to provide technical advice and support.

As well as the working party, several other groups and individuals were involved throughout the project.

Thanks must be given to: Deputy Vice-Chancellor, Professor Peter Robinson; Administrative Assistant, Department of Information and Communication Technology, Karen Williams; lecturer, Department of Accounting and Finance, Greg Laing; Budgets Officer, Financial Services, Chan Shah; Training and Liaison Accountant, Financial Services, Michael Ramsay. FRONT: Faculty Finance Officer, Faculty of Commerce, Rosemary Cooper; Director, Financial Services, Susan Smith; Project Officer, Continuous Improvement, Amanda Howard; Career Development Co-ordinator, Personnel Services, Pam Piela; and Administrative Assistant, Department of Chemistry, Jenny Sheridan. ABSENT: Head, Academic Development Services, Associate Professor John Panter; Faculty Officer, Faculty of Science, Pat Macquarie.

The Financial Management working party (from left): BACK: Faculty Finance Officer, Faculty of Health and Behavioural Sciences, Paddy Fitzgerald; Administrative Assistant, Department of Information and Communication Technology, Karen Williams; lecturer, Department of Accounting and Finance, Greg Laing; Budgets Officer, Financial Services, Chan Shah; Training and Liaison Accountant, Financial Services, Michael Ramsay. FRONT: Faculty Finance Officer, Faculty of Commerce, Rosemary Cooper; Director, Financial Services, Susan Smith; Project Officer, Continuous Improvement, Amanda Howard; Career Development Co-ordinator, Personnel Services, Pam Piela; and Administrative Assistant, Department of Chemistry, Jenny Sheridan. ABSENT: Head, Academic Development Services, Associate Professor John Panter; Faculty Officer, Faculty of Science, Pat Macquarie.

The project began with a general discussion on the broad categories of training and on the core modules and topics within those categories.

Sub-groups then investigated the training needs of various target groups through a series of interviews, and identified the key training components as external issues, forecasting and costing, budgeting and internal budget distributions.

Within these headings, small groups developed detailed lists which they formatted into comprehensive plans of financial needs.

The Career Development Unit then re-worked these plans, to ensure logical sequence and comprehensiveness as training modules.

The working party has achieved its objectives of identifying specific financial and budget management training needs and providing advice on program design and content of training modules.

Pilots of the first two programs, Introduction to Budgeting and Budget Planning are soon to be conducted and expressions of interest are sought from both academic and general staff members.

The participants will have the dual roles of providing feedback on the module content and presentation and to critique the courses for other staff in their faculties or departments.

The first program looks at how the University is funded, the purpose and constraints of budgeting and an overview of planning a budget.

The Budget Planning program looks at the steps involved, fixed, variable and hidden costs and salaries and part-time teaching and housekeeping and equipment budgets.

Other Financial Management training modules are also proposed, dealing with managing research accounts, consulting and setting up new courses.

Anyone interested in attending these courses can contact Pam Piela in the Career Development Unit, ext. 4712.
A new report published by the Bureau of Immigration, Multicultural and Population Research challenges the myths about street kids from ethnic backgrounds and calls for greater community understanding.

It suggests that it is wrong to categorise all groups who hang around the streets and public places as homeless, from dysfunctional families and involved in criminal and drug-related activities.

While some do fit these categories, the report shows many are on the streets to avoid boredom and to seek fun.

For some, spending time on the streets could be seen a natural part of growing up, akin to a rite of passage into adulthood.

While a few are homeless, many live with their parents, relatives, in share houses or refuges.

The bureau's report, 'We're Just Like Other Kids – Street-Frequenting Youths of Non-English-Speaking Backgrounds', examines youth in Sydney's Fairfield, Liverpool, Bankstown and Campbelltown areas.

It suggests there could be as many as several hundreds who 'hang around' the streets and public places.

The report author, Dr Rogelia Peppe, from the Centre for Multicultural Studies at this University, interviewed 100 people, 53 males and 47 females, aged between 13 and 23.

They were from backgrounds including Asian, Spanish, Lebanese, Pacific Island and former Yugoslavia.

The report suggests that media stereotyping has led to many people assuming that ethnic young people who hang around the streets are necessarily out to create trouble.

'There is a tendency for the media to sensationalise NESB young people on the streets by portraying them as coming from dysfunctional families, suffering the trauma of migration, as engaging in illegal activities, and being a threat to peace and order,' the report says.

But very little attention is given to providing a more in-depth examination of the factors that influence young people's involvement on the streets such as poverty and unemployment, lack of adequate support, more organised adult groups of illegal elements, and the racist and discriminatory behaviour towards them, the report says.

Many young people complained of discrimination generally and unfair treatment by police.

In contrast to the media portrayal, local community and youth workers point to the problems of lack of adequate youth-focused services, and a lack of support and understanding from the community at large.

This is backed up by the comments from many young people who said they wished people would try to understand the reasons why they have problems and hang around the streets, and then help them solve these problems.

For some, particularly those from Vietnamese backgrounds, factors such as feeling torn between two cultures and involvement in intergenerational conflicts could contribute to street-frequenting behaviour, the report says.

Some face high expectations from parents about achievement at school and careers directions.

Many are expected to be obedient children and in some cases, help out with the family business in addition to study.

This leaves some torn between two cultures: on the one hand, the Australian culture which encourages independence and on the other, their family's culture emphasising a strong sense of belonging to the family, encouraging dependence instead of breaking away, the report says.

Some had left school because of problems caused by low English proficiency.

The Vietnamese youths in particular had often had interrupted schools, with some having lived in refugee camps before arriving in Australia and were placed in a year level at school that reflected their age rather than their competency.

Boredom and family-related issues were the most commonly cited reasons for street-frequenting activity in the sample studied.

A least one-quarter of those interviewed experience neglect or abuse at home, including both physical and sexual abuse.

The report found that these young people have the same aspirations as most other young people: they want careers, they want to get married, travel and lead happy, prosperous and long lives.

Most said they did not believe they would be on the streets in five years and said they would change their lifestyles.

The report makes several recommendations including employing strategies that reach out to these young people, rather than expecting them to be able to locate services and employing more street workers.

It also says the school system should establish structures that increase the opportunity for NESB street-frequenting young people to succeed in educational pursuits, including having adequate special assistance in English language tuition.

Recent paintings of Dong Wang Fan
His works have been selected in many exhibitions, collected by museums, published and won favourable comments and prizes.

Dong's work investigates how the different cultural influences have their impact on the development of his artistic identity in an ever-shifting environment.

This is done by showing the results of the impacts that contribute to the artist's diverse visual languages employed to represent a somewhat ambiguous identity.
Six Keynote Speakers, and more than forty speakers from Universities in Australia and New Zealand talk about computers in tertiary education

Prof. Richard Dawkins, New College, Oxford
Richard Dawkins is the first holder of Oxford's newly endowed Charles Simonyi Chair of Public Understanding of Science, and a Professional Fellow of New College, Oxford. His books include The Selfish Gene, The Blind Watchmaker and most recently (1996) Climbing Mount Improbable. Richard Dawkins appears frequently on British television and radio, and in 1991 was selected to give the Royal Institution Christmas lectures for Children (televised by BBC). His prizes and awards include the Royal Society of Literature Prize, the Los Angeles Times Literary Prize, the Michael Faraday Award of the Royal Society of London, and the Nakayama Prize for Human Science, 1994.

Dr. Geoff Cumming, School of Psychology, La Trobe University
For 20 years Geoff Cumming has studied educational uses of computers, with emphasis on assessing learning outcomes. His research projects have investigated children learning to read, logic programming in the classroom, intelligent learning environments, the learning of English as a second language, and the learning of statistical concepts.

Larry Tesler, Vice President of Internet Platforms, Apple Computer Inc.
Larry Tesler has been a vice president of Apple for more than nine years and its chief scientist for three. He was instrumental in the early development of Apple's user interface and media technologies. Larry is the author of several publications, including the widely cited article, "Networked Computing in the 1990's", which first appeared in Scientific American in September, 1991.

Prof. Michael D'Alessandro, University of Iowa Hospital
Michael P. D'Alessandro received a B.S. in Computer Science and a B.S. in Biology from Wayne State University and an M.D. from the Wayne State University School of Medicine. He completed a paediatric radiology fellowship at Children's Hospital/Harvard Medical School and is currently an Assistant Professor of Radiology at the University of Iowa and is the architect of the definitive medical world wide web site, the Virtual Hospital.

Prof. Jerome Durlak, York University, Ontario
Jerome Durlak is an Associate Professor in the Mass Communications Program at York University, Associate Director of CulTech and Research Director of the Intercom Ontario Project. Currently, he teaches courses on communications policy and the social impact of new communications and telecommunications technologies.

Jonathan Knowles, Senior Product Manager, QuickTime Technology, Apple Computer Inc.
Jonathan Knowles was a director of research and academic computing at the science and engineering college of Claremont Colleges in Claremont, California. He had previously worked as an engineer for Apple Computer and developed media labs at both the School of Cinema-Television at the University of Southern California, and the Art Centre College of Design.

Delegates will receive a satchel with conference programme and abstracts including a CD ROM of Conference Proceedings. Full registration also includes Conference Dinner, Riverboat evening and all lunches.

Proudly sponsored by Campus Personal Computing and the Apple University Consortium

For more information contact Bethany Farquhar via the ITS Call Centre 21 3775
or visit our web site http://techshop.cc.uq.edu.au/events/conference.html
Students gain make-up skills

The Faculty of Creative Arts Theatre Strand recently ran a stage make-up skills course. This course ran over four Saturdays for a total of 12 hours. Theatre Strand students from all years and disciplines (technical, acting and design) participated.

John Vucic was brought in as a guest lecturer for this course. Mr Vucic is employed at a local high school and has had practical experience in stage make-up with local theatre groups.

The course covered the application of basic make-up for television and stage, and the process of aging a person from the ages of mid-30s through to late-80s.

What the students found most interesting was the special effects make-up that was taught in the last weeks. This covered the replication of bruises, burns and lacerations.

All were amazed at the depth of realism that could be achieved with some basic make-up and stage blood. The attached photograph is an example of an eye wound that was constructed as a demonstration.

Elections of student representatives

Elections are being held for student members on the following committees:

Academic Senate (five positions)
All Faculties (between four and 12 positions per faculty)
The Board of Studies for Environmental Science (one position)
The Library Committee (one position)

Full details will be included in notices, on notice boards throughout the University, or may be obtained along with nomination forms from Faculty Officers, the SRC or the Election Officer, Jane Macquarie, in the Secretariat office, Administration Building from Monday 9 September.

Nominations close Wednesday 25 September.

If required, ballots will be held on 16 and 17 October in Room 305 of the Administration Building between 10.30am-2.30pm and 1.30-3.30pm.

THE FRIENDS CHAPTER OF THE UNIVERSITY OF WOLLONGONG FOUNDATION
presents a series of lectures and seminars by
Dr Peter Cameron
on the theme
'Spirituality and the Limits of Freedom'

LECTURE 2: 'The Limits of Freedom'
Tuesday 10 September, 7-9pm
Union Function Rooms 1 & 2
Light refreshments available
A follow-up seminar will be held at the same venue the following evening, Wednesday 11 September
All Welcome
For further information, David Muscio ext. 3073 or Antoinette Mataranz ext. 3169.

University of Wollongong
Course & Career Information Evenings
Discuss your degree options with University Staff on Campus

FRIDAY 6 SEPTEMBER
Engineering (Bld4) 4-9pm
Informatics (Bld35) 4-9pm
Health & Behavioural Sciences (Bld41) 4-8pm
Science (Bld41) 4-9pm

TUESDAY 17 SEPTEMBER
Education (Bld67) 5.30-8.30pm
Creative Arts (Bld24 & 25) 5.30-8.30pm

WEDNESDAY 18 SEPTEMBER
Arts (Bld11 Funct. Rm1,2) 5.30-7.30pm
Commerce (Bld11 Funct.Rm1,2) 5.30-7.30pm

Transport details and further information are on the internet: http://www.uow.edu.au
or Tel (042) 21 3248
Fundamentalists on campus - Who cares?

by Keith Tognetti

Following the article in the last issue of *Campus News* by Tom Halloran, this note challenges you to come to the lectures to be given by our Ethel Hayton Fellow, Dr Peter Cameron.

As a sometime public prosecutor, Minister and most notably Australia’s only extant heretic, he is extremely well qualified to engage with us as he explores the ramifications of fundamentalism.

If you value freedom and abhor totalitarianism try to get a copy of his book ‘Fundamentalism and Freedom’.

There he describes the main features of the fundamentalist who is characterised by ‘a distrust and fear of freedom, a belief in the importance of authority and in controlling what other people believe; a corresponding preference for obedience rather than love; a desire to give people what they want rather than the truth; a readiness to persecute and execute anyone who is of a different persuasion’.

Furthermore, ‘the fundamentalist is uncomfortable with freedom, truth and dissent and very much at home with authority, obedience and conformity’.

I will leave the most striking feature of fundamentalism for our scholar to develop in person.

Although he will direct his discussion towards religion, much of what he will say is readily applicable to many of our other quasi religions; for example the religion of the GNP worshippers – these so-called economic rationalists.

And let us not look farther than our own institution to observe these features impacting the very penetralia of academe, that is the community of scholars, as it becomes dominated by the business corporation.

No matter by which of its many names it is known – fundamentalism, totalitarianism, gradgrindery, what Dr Cameron is referring to is an apparatus that is an organisation based on some complex of machines and humans that glorifies the machine and inexorably degrades the human.

The functionaries of this apparatus, the apparatchiks, are the antithesis of what a real scholar should be. What might be appropriate for the mass production of widgets is anathema for academe.

A very definite sign of the growth of the apparatus is that its autonomy is considered to be more important than that of the individual.

Consider for example what happens when we are presented with yet another ‘labour-saving device’ a computer.

Did the last one, despite all the talk of total quality management and best practice, actually give you more quality time?

Quite the opposite; it simply allowed the apparatus to be even more invasive.

Only when we are prepared, as a community of scholars, to fearlessly explore such issues as freedom and fundamentalism can we hope to put the apparatus in its proper place – that is as a servant of the community rather than its master.

Oh, I almost forgot, the real reason that Dr Cameron was branded a heretic is that he figured out a way for academics to get a 25 per cent pay rise indexed to CPU.

Furthermore he intends to tell you how this can happen if you come along to his lectures!

The lectures will be held on:
10 September (‘Limits of Freedom’); 17 September (‘What is the Spirit?’); 8 October (‘Difficulty and Importance of Prayer’); 15 October (‘The Trinity’); 22 October (‘Faith and Intelligence’).

The lectures will be held in the Union Function Rooms from 7-9pm.

For further information, or to express your interest in attending the lectures and/or seminars, contact Antoinette Matarranz, phone (042) 213 069, or Executive Officer, Friends’ Chapter of the University of Wollongong Foundation, David Muscio, phone (042) 213 073.

Concert features our young talent

A City of Wollongong Symphony Orchestra Concert on Saturday 21 September at 8pm in the Hope Theatre will feature three young soloists in a concert which is being billed as ‘Salute to Youth’.

Soprano Jane Parkin is a fine young singer and actress who is completing a double major in Music Performance and Theatre in the Bachelor of Creative Arts Degree.

She will sing Mozart’s motet ‘Exultate, Jubilate’ and the ‘Laudate Dominum’ from his ‘Solem Vespers’ in which she will be joined by choristers from the ranks of her fellow students.

Wollongong flutist Suzanne Cowan is about to complete the Bachelor of Music degree at the Sydney Conservatorium.

She is principal flute in the SBS Youth Orchestra and will play the virtuoso Flute Concerto (1908) by Carl Reinecke made very popular a few years ago through a recorded performance by James Galway.

Kate Stephenson is a local oboist who is also a former member of the NSW Wind Orchestra.

He will play the Oboe Concerto by the Italian baroque composer Benedetto Marcello.

The popular Mozart piece ‘Eine Kleine Nachtmusik’ and Salieri’s sinfonia ‘La Veneziana’ will complement the soloists’ items.

Tickets are available from the Faculty of Creative Arts Office or phone 214 214. Adults $19; concession $15.
This year has been outstanding for Australian-Tongan concert pianist and Faculty of Creative Arts lecturer, Dr Marilyn Meier.

In July, the Prime Minister of Tonga, Hon Baron Vaea, launched her new recording ‘Liszt Legends’ featuring some of the Hungarian composer Franz Liszt’s most well-known and popular piano pieces.

The cover photo of this CD shows Marilyn with a piano on the beach on Fa’fa Island in the Kingdom of Tonga taken during filming of the Juniper Film Series, ‘Pacifica: Tales of the Southern Seas’ which featured Marilyn performing in Tonga.

The launch took place at a reception after a three-week concert tour of the Kingdom which included performances for the birthday celebrations for His Majesty King Taufa‘ahau Tupou.

During this visit a presentation was made to Marilyn by the King of the Silver Jubilee Medal for services to music in Tonga.

Recently, after national auditions, Marilyn has been ranked Royal accolades for Marilyn Meier by the ABC as one of top performers in Australia, which means offers of concerts and radio recordings will be forthcoming.

Her first official ABC performance will be on 12 September with the Tasmanian Symphony Orchestra, performing the ‘Etruscan’ Concerto by Australian composer Peggy Glanville-Hicks.

On 5 September she will perform with French tenor Damien Top in Canberra, and on 13 September she will be giving a solo recital for the Nepean Music Club.

Marilyn’s recording is available on CD and tape.

It features Two Legends: St Francis of Assisi Preaching to the Birds and St Francis of Paule Walking on the Waves; The Six Consolations; The Three Libestraeme and The Hungarian Rhapsody No.12.

**Radiance by Louis Nowra**

Theatre South’s next production is Radiance by Louis Nowra, writer of the hit film Costi.

It tells the story of three half-sisters who meet again in the ramshackle Queensland house where they grew up. They have gathered to bury their mother. Each sister had a different father and each has gone her own way.

Radiance is a deeply moving play about families, loyalty, silence and survival. The sisters try to bury the ghost of their mother whose ruinous effect on their lives slowly comes to light.

This is a co-production between Theatre South and the New England Theatre Company. It runs at the Bridge Theatre from 5-14 September.
16 September: 1996 Kirby Lecture, 6.45pm in the Hope Theatre, by Deputy Chairman, and Chairman Designate, BHP, Mr Jerry Ellis. Enquiries: Di Kelly, phone 213612, or Rob Castle, phone 213 666.

Two-day intensive Suicide Intervention Workshops will be held at the University to help health workers, professionals and lay people recognize and assess persons at risk, and to master a model for effective suicide intervention. These workshops are available on 27 and 28 September, 25 and 26 October and 29 and 30 November. Cost: $35. Bookings: (042) 971 426 or (042) 213 876.

Meeting dates for the Human Research Ethics Committee and the Animal Ethics Committee for this year are: Human Research Ethics Committee: 22 October, 19 November, 17 December. Animal Ethics Committee: 20 November. Agenda items are due two weeks before meetings. Enquiries Karen McRae, Office of Research, by email or on ext. 4457 on Tuesday, Wednesday or Thursday.

The Campus Alumni Bookshop is open on the second and fourth weekends of each month (Saturday and Sunday 1-5pm). Come and browse through a wide selection of preloved textbooks and fiction. Location: Campus East, Cowper Street, Fairy Meadow (opposite Science Centre). All proceeds directed towards Campus projects. Donations of material are invited. Enquiries to Alumni Office, phone 213 249 or 291 951.

Cell and Molecular Seminar Series: Held on Wednesdays in the Department of Biological Sciences (Building 35), University of Wollongong, Dates: 11 September, 23 October, 30 October. Enquiries: Associate Professor Ted Steele, Associate Professor Ross Lilley, Associate Professor Mark Baker, Dr Mark Walker, Ms Wendy Russell, Dr Ren Zhang or Dr Mark Wilson, phone (042) 213 013, fax: (042) 214 135.

Graduating students productions:
- Australian One-Act Plays or excerpts – 4-8 November, Kate Newey, Sharon Bell, Peter Shepherd possibly to direct. Performance Space.

Art of Lunch
Every Thursday during session, from 12.35-1.25pm. Venues are the Hope Theatre, Union Hall Foyer and Faculty of Creative Arts Music Auditorium. Brochures and information are available from Marilyn Meier, ext. 3990, and Jenny Fullerton, ext. 3996.

Long Gallery

Stop Press
Illawarra Grammar School
Western Ave, West Wollongong
OPEN DAY
Thursday 5 September
11am to 3pm
(Feel the difference)
A great chance to have a look "beyond the gates" "through the trees" "into the classroom"
Junior and Senior School
Visit the Asian Cafe for snack time
Phone 288266