

ARCHIVES

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law / lɔ /, *n.* 1. the principles and regulations emanating from a government and applicable to a people, whether in the form of legislation or of custom and policies recognised and enforced by judicial decision. 2. any written or positive rule, or collection of rules, prescribed under the authority of the state or nation, whether by the people in its constitution, as the **organic law**, or by the legislature in its **statutes**, or by the treaty-making power, or by municipalities in their ordinances or **bylaws**. 3. the controlling influence of such rules; the condition of society brought about by their observance: *to maintain law and order*. 4. an agent that helps to maintain these rules. 5. a system or collection of such rules. 6. the department of knowledge concerned with such rules. 7. the body of such rules concerned with a particular subject or derived from a particular source: *commercial law*. 8. an act of the supreme legislative body of a state, distinguished from the constitution. 9. the principles applied in the common law, as distinguished from equity. 10. the profession which deals with law and legal procedure: *to practise law*. 11. legal action; litigation. 12. any rule or principle of proper conduct or collection of such rules. 13. (in philosophical and scientific use) a. a series of events in a relation of sequence of phenomena invariable under the same conditions. b. a mathematical rule. 14. a commandment or revelation from God. 15. (in the Bible) the divinely appointed order of the system of the Mosaic Law: *the Law of Moses*. 16. the five books of the Pentateuch. 17. the five books of the Pentateuch forming the first of the Jewish divisions of the Bible. 18. the preceptive part of the Bible, esp. of the New Testament, in contradistinction to its promises: *the law of Christ*. 19. *Sport*. a struggle given to an animal that is to be hunted, or to a weaker competitor in a race.

medicine / 'medɪsɪn, 'medsɪn/, *n., v., -cine* /-sɪn/. *n.* 1. any substance or substances used in treating disease; a medicament; a remedy. 2. the art or **science** of restoring or preserving **health** or due physical condition, as by means of drugs, surgical operations or appliances, manipulations, etc. (often divided into medicine proper, surgery, and obstetrics). 3. the art or **science** of treating disease with drugs or curative substances (distinguished from *surgery* and *obstetrics*). 4. the medical profession. 5. any object or practice regarded by primitive peoples as of magical efficacy. 6. any unpleasant treatment or experience, esp. one that is difficult to accept.

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Van Gogh's Ear is edited by Frances Wilden, with layout and design by Gillian Stack. Letters to the Editor (no more than 300 words and signed), reports on outstanding and unusual research, news and human interest stories, are welcome.

The next edition of *Van Gogh's Ear* will be a special end of year issue.

Contributions and media enquiries should go to Frances Wilden or Alison Grahame, Information and Public Relations Unit, ph (049) 21 6440, fax (049) 21 6400.

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MEDICINE, HEALTH SCIENCES AND LAW

In this issue of Van Gogh's Ear we profile the Faculties of Medicine and Health Sciences and Law.

The Faculty of Medicine, recently joined with Health Sciences, has an established international and national reputation and is involved in a wide range of research and health promotion projects.

The Faculty of Law, established in 1992, is growing in stature as a result of its research efforts and because it provides students with the unique opportunity of completing all the requirements for the practise of law, through its Professional Program.

We hope you enjoy this overview of the Faculties' activities.

OUTREACH

by Professor John Hamilton, Dean, Faculty of Medicine and Health Sciences

At the beginning of this year the previous Faculty of Medicine and the previous Faculty of Health Sciences joined together...

...and this year has been heavily occupied in consolidating the now expanded Faculty of Medicine and Health Sciences.

Faculties in health professions have a distinctive role in reaching out to the community and in particular to the health services, both curative and preventive. Thereby they contribute to health services, create educational settings for their students and establish an expanded setting for research - a laboratory without walls. The health service and its own staff in turn, contribute to education and, in many cases, research.

The Faculty of Medicine and Health Sciences at Newcastle is well known internationally and nationally for many of its distinctive achievements, a noted point at the recent World Health Organisation Global Meeting on the Future of Medical Education. Each of the programs in the expanded faculty have made distinctive contributions with a particular emphasis on outreach to the community. For the articles in this current edition of *Van Gogh's Ear* we have chosen to highlight just a few of many examples: education through distance learning; education linked to the health needs of other countries; inter-disciplinary contributions to public health and to environmental hygiene; contributions to nutrition and the Hunter Food Network; to an emerging speciality

of placental medicine; and to the exploration of the tragedy of teenage suicide.

One of the most promising parts of this year's work has been an internal conference on Interprofessional Cooperation. Many bold steps had already been taken, particularly in the previous Faculty of Health Sciences, in linking professional education through core subjects and we are now exploring how, both in the workplace and in education, students of the health professions can work more closely and form more effective teams. We are exploring this with respect to care of the aged, in Aboriginal and Torres Strait Islander health, in midwifery, and in rural health which has been itself a distinctive priority of all the health professional programs. We were particularly helped by close involvement from other groups in the University with similar aims and in particular from Nursing, Law and Social Work. Our outreach will increasingly

be based upon close cooperation between a wide range of sectors within the University.

*Professor
John Hamilton*



MAJOR ACHIEVEMENTS IN NUTRITION AND DIETETICS

by Professor David Roberts, Professor of Nutrition and Dietetics

The Discipline of Nutrition and Dietetics has gone through a number of mutations since its inception four years ago.

It started as a division in the Department of Health Professions, graduated to a department for one year and then devolved into a discipline with the amalgamation between the Faculties of Health Sciences and Medicine at the beginning of 1994.

The Foundation Chair was appointed in 1991 and since then staffing has increased to 8.5 academic staff and 3.5 general staff. The discipline is responsible for two courses: the Bachelor of Health Science (Nutrition and Dietetics) and the Bachelor of Applied Science (Consumer Science). Both courses are in their infancy with the first graduates in Consumer Science appearing in 1993 and in Dietetics in 1994. Our focus is on food and nutrition research and education with the long term goal of becoming world leaders in those areas.

This may take some time (!) but in this era of quality management we have established a series of five year goals and targets with that long term goal in mind.

The amalgamation with the Faculty of Medicine enables a number of useful linkages to be fostered. In many ways nutrition is an ideal partner in a number of cross discipline areas from the basic sciences

through to the applied, clinical and behavioural sciences. Members of the discipline have interests in nutritional biochemistry, social nutrition, food and nutrition education and food technology. These interests span a number of domains which enable us to collaborate with psychologists, sociologists, behavioural, epidemiological, clinical and basic scientists. Support for these activities is dependent on interactions within and between faculties and we are developing those using our Research Seminar Program and our Journal Club Meetings. We have also had "Meet the Discipline" meetings with the faculty and, equally importantly, with industry groups so that those outside the University can interact with us.

A particularly important development was the establishment of the Hunter Food Network under the auspices of TUNRA. The network provides us with access to many local and regional manufacturers. This provides educational opportunities for our students and the opportunity for us to initiate and/or respond to the research needs of individual companies. It is an example of our outreach to the community.

We are also working directly with community groups through the Coalfields Healthy Heartbeat Program, offering 'Best Practice' advice to fast food premises to

enable the supply of lower fat and 'healthier fat' products. This is being developed into a Fast Food Accreditation program in cooperation with Cessnock Council. We have also begun to look at public attitudes to fat in the diet and how knowledge of this can help focus nutrition education messages.

Another area of interest is the nutritional needs of older adults. We have, in collaboration with four stakeholders (Royal Australian College of General Practitioners (RACGP); The Council on the Aging; Dieticians Association of Australia (DAA) and Self Care Pharmacy), developed a screening tool for poor nutrition in the over 65's. This is being trialled in NSW and South Australia. In addition we are investigating the role of flavour enhancers in improving the taste of foods supplied to the elderly. Our basic research continues to look at dietary fats and their role in membrane function with respect to heart disease, immunity and cancer. We have two PhD and two MSc students currently enrolled.

In addition to all this we have brought on stream the two undergraduate courses mentioned above. To have achieved this in three years is an indication of the quality and dedication of the members of this discipline.

Robert Blake from the Discipline of Nutrition and Dietetics with some of the equipment used in research.



OVERSEAS DISTANCE LEARNING

by Professor Richard Heller, Centre for Clinical Epidemiology and Biostatistics

It became apparent some years ago that if we at the Centre for Clinical Epidemiology and Biostatistics (CCEB) wanted a major national and international teaching role we would have to counter a couple of problems.

These were our small local population base and the fact that we were not based in a capital city and therefore lacked credibility. One obvious answer was to develop a distance learning course which could be run from anywhere and would allow us to build on the credibility developed from high quality teaching based on initially small numbers.

We started the first Australian Distance Learning cohort in 1991, having been offering and refining our Masters and Diploma courses since 1983. The success of this venture has given us high national prominence as teachers of our particular aspect of public health.

The impetus for the development of our postgraduate program was the Rockefeller Foundation funded International Clinical Epidemiology Network (INCLIN). Through INCLIN we have been part of one of the most successful training programs for building research capacity in the developing world. We managed to persuade INCLIN to allow us to try distance learning in three settings.

First was China - most ambitious. We had been training clinicians, biostatisticians, health social scientists and health economists from two INCLIN institutions but these in-

stitutions were losing the majority of their trained people. Those going for training, either here or in our sister training centres in North America, were not returning to China but finding employment in the USA. Since full capacity had not been achieved in either institution (INCLIN aims for around 10 people in each place for a critical mass), we decided to offer the completion of their training by distance learning.

Eight brave people enrolled and we employed a part-time senior lecturer who was a clinical epidemiologist based in China to act as coordinator. I knew the program would be a success when I attended the annual meeting of the Chinese clinical epidemiology network (CHINACLEN) and our distance learners presented the research protocols they had prepared. The first question after the first presentation elicited a long pause, followed by an excellent answer by the presenter. It was clear that she understood the methodology we had been teaching at a distance. Our funders from INCLIN and the Rockefeller Foundation and I realised this at the same moment.

Four of the eight have completed the coursework and are enrolled in the Masters research project, two still have some coursework to complete and two have

dropped out (one to an overseas scholarship from another source and one to the lure of private practice). The two institutions have remained as part of INCLIN and are likely to reach their critical mass.

Flushed with the at least partial success of this first attempt, we persuaded INCLIN to allow us to try Africa! The situation in Addis Ababa was similar to China - four of eight trainees returned. In Harare there were such manpower shortages that the best people could not be spared to go overseas for the year's coursework. Ten people enrolled at the start of 1994 - these included the chairmen of the Departments of Medicine and Surgery in Addis Ababa (the surgeon being the only neurosurgeon in the whole of Ethiopia) and some of the high fliers of both universities. One of the distance learners has become Dean since enrolling (probably not cause and effect) and remains enrolled. We have run two residential courses for the distance learners (in their universities) and have become impressed with their commitment and competence. As a group, they achieved the highest grades of any in the Semester 1 exams. Many of their colleagues want to join the course in the future.

We are excited about the program and there is increasing attention being paid to it. The University of Newcastle was the only university named in the recent World Development Report "Investing in Health", produced by the World Bank.

Enquiries are being received from all over the world and we hope that, if we can continue and improve the program, it will achieve our initial objectives. We are grateful to the University for allowing us to try this experiment.



A group of distance learners enrolled in courses at the Centre for Clinical Epidemiology and Biostatistics.

PROVIDING ENVIRONMENTAL HEALTH INFORMATION

by Professor Michael Hensley, Newcastle Environmental Toxicology Research Unit

Does air pollution in Mayfield and Stockton affect the health of children living there? What is the level of childhood lead poisoning in the Hunter region and the rest of Australia? Will a new highway increase the blood lead level of children at a nearby school?

There are many more questions about how the environment in which we live, play and work might influence our health or that of future generations. These questions involve many stakeholders: government agencies, businesses, communities, educators, researchers and individuals. Since decisions are made every day which influence our environment for better or worse, there is an increasing need for scientifically valid information about the current and potential effect on health of environmental agents.

The Newcastle Environmental Toxicology Research Unit (NETRU) provides scientifically valid information to assist in decision making about current environmental questions. It provides information and carries out research projects for a range of customers and, at the same time, fulfils an academic role by generating publishable research data and providing opportunities for postgraduate education.

One of NETRU's present priorities is environmental lead contamination and it has developed and implemented large scale epidemiological studies to provide valid and relevant data for public health and community decision making.

The Hunter Lead Studies developed out of initial work by staff of the Hunter Public Health Unit (HPHU) who demonstrated elevated blood lead levels in children living in the vicinity of the lead smelter in north Lake Macquarie. NETRU has managed the North Lake Macquarie blood lead surveillance program since 1992 on behalf of the PHU.

The program, funded by the NSW Health Department, offers six monthly blood lead testing. Approximately 300 children have



A young boy is tested as part of the Hunter and Illawarra Study of Airways and Air Pollution (HISAAP), another NETRU project (25 October 1994)

their blood lead level measured at each cycle of testing. Since May 1993 nearly all eligible children have had at least one test (about 650), indicating community demand for the service. As well as contributing to a clinical service in conjunction with the PHU and Area Child, Adolescent and Family Health Services, data gathered in the survey is being used as part of the scientific foundation for an environmental management plan for the area. Clear relationships have been demonstrated between estimates of exposure, such as distance from the smelter, and children's blood lead. In addition, mean blood lead levels have been documented as interventions to lower blood lead and have been implemented by government agencies, the community, and industry.

In May 1994, 43 percent of children living in the north Lake Macquarie area who were tested had levels of 10 micrograms per decilitre ($\mu\text{g}/\text{dl}$) or higher, the NH&MRC blood lead goal for all Australians. However, this is a substantial improvement from the first test in 1991.

At that time 84 percent of one to four year olds in Boolaroo and Argenton had levels of 10 $\mu\text{g}/\text{dl}$ or over, as did 68 percent of school

age children. A downward trend in blood lead seen in late 1993 has not continued this year when blood lead levels measured in May 1994 stayed about the same.

There is an increasing need for scientifically valid information about the current and potential effect on health of environmental agents.

NETRU has also designed and implemented an opportunistic survey of paediatric in-patients at the John Hunter Hospital to test the feasibility and validity of using blood collected from children for other reasons. The Paediatric In-Patient Lead Level Survey (PILLS) has gathered data estimating community blood lead levels in a less expensive and more convenient manner by using blood collected for diagnostic tests. This opportunistic approach has been evaluated for in-patients and will begin soon for out-patients. Preliminary comparisons with community collected lead levels show that this rapid and low cost approach may enable widespread and long term monitoring of the blood lead levels of children.

PLACENTAL FUNCTION AND DYSFUNCTION DISCUSSED AT INTERNATIONAL CONFERENCE

by Professor Alan Boura and Professor William Walters, Reproductive Medicine

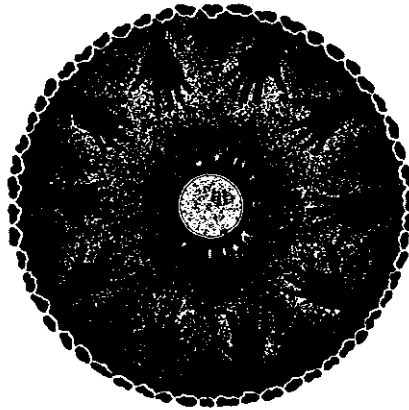
Knowledge of human placental function, and of placental changes occurring during diseases associated with pregnancy, has increased considerably over the past 20 years.

As so often happens, once a critical mass of information has been attained from research, our total knowledge may now continue to grow exponentially, perhaps eventually expanding to throw more light on the causative factors involved in other, apparently unrelated, diseases.

Current evidence suggests that this is already occurring. For a long time it has been generally appreciated that the intrauterine conditions, to which the foetus is exposed, will profoundly influence its development. More recent observations additionally indicate that intrauterine conditions also modify the much later in life functioning of critical, central and peripheral physiological systems, thereby affecting subsequent behaviour and predisposition to disease. For example, babies growing in utero less rapidly than normal are born underweight and, on average, are more likely to need intensive care immediately postpartum. In childhood they learn more slowly than usual and eventually, as adults and the elderly, they are more prone to disease.

Thus, if intrauterine conditions can be made as near to optimal as possible for the developing foetus, a large amount of human suffering will be alleviated, with considerably reduced utilisation of expensive health care resources.

One way of helping to ensure an optimal intrauterine environment is for the mother not to be exposed to toxic agents during pregnancy. Some of these, such as viral and bacterial infections, frequently cannot be escaped although others are more readily avoided, such as smoking and drinking alcohol. These drugs are potentially hazardous to both mother and foetus. Other problems develop from malfunctions of the complex immunological, hormonal



and physiological changes that have to occur as pregnancy proceeds.

Amongst health problems associated with pregnancy, the placenta plays major roles in a number of common diseases. A placental disorder is almost certainly the initiating cause of the relatively common disease of pre-eclampsia or pregnancy induced hypertension. This disease is frequently associated with intrauterine foetal growth retardation, although the latter can also occur in the absence of pre-eclampsia.

Whatever the cause, the most common reason for reduced foetal growth is failure of the utero-placental vasculature to develop normally, thereby promoting inadequate materno-foetal blood flows with consequent reduced availability of nutrients to the developing baby. With increased knowledge of causative factors, both diagnosis and treatment of these and many other pregnancy related conditions, have substantially improved during the past 20 years. Medical research in Australia has played its full part in furthering these advances. In each Australian capital city there is at least one group of researchers studying normal placental function and the changes induced by disease. Others are based in regional centres, such as Newcastle.

As Australian placental research is highly regarded by the international medical research community, it was decided to hold an international conference in this country, of medical scientists interested in normal

placental function and placenta related diseases. Placental research worldwide has expanded, requiring formation of a federation of the various regional research groups, to encourage coordination of international research activities and act as a forum for scientific discussions.

Responsibility for organisation of the federation's first meeting has been given to the discipline of Reproductive Medicine, the University of Newcastle. Thus, the first Meeting of World Placenta Associations was held in Sydney, October 24-28. Medical researchers from over 20 countries attended.

The theme for the First International Meeting of World Placenta Associations was an area in which Australian research is pre-eminent. Emphasis was placed on recent advances in knowledge of mechanisms controlling normal placental blood flow and the disordered biochemical changes developing in disease. When placental blood flow becomes inadequate it is usually contributed to by increased blood vessel resistance, in both maternal and foetal circulations, caused by changes in local and circulating levels of vasoactive hormones together with structural alterations in blood vessel walls.

The program for the meeting also contained a number of state of the art lectures, given by international experts. These described recent advances in knowledge of early influences on placental function and development, continued with updates on the changes developing during gestation, and finished with lectures on mechanisms involved in delivery of the foetus and the consequences of placental disease occurring in adulthood and old age. Consideration was also given to current knowledge of the endocrinological, immunological, biochemical and pathological changes associated with pregnancy related problems. Attention was also drawn to the therapeutic usefulness of drugs and possible advances in future drug treatment of diseases of pregnancy.

TAKING OCCUPATIONAL THERAPY TO NEPAL

by Ms Suzanne Lyons, Occupational Therapy

Think of occupational therapy and most people would not think of its application in terms of third world or developing countries.

Traditionally, occupational therapy has had a broad role providing intervention where a person's ability to perform their life roles has been negatively affected by any physical, mental or emotional event. Most would believe that occupational therapy has little role, if any, in providing assessment and treatment intervention in, for example, Nepal or Vietnam. However, the Discipline of Occupational Therapy is making forays into this area, particularly in Nepal.

This has been instigated by the enrolment in occupational therapy of five students from Nepal, currently in the final years of their program. These students, together with those from Hong Kong, Korea and Thailand, have attempted to ensure that their education is relevant to the current health framework of their own countries, whilst meeting the requirements for undergraduate study in Australia. In addition, the discipline seeks to provide these graduates with the professional skills and confidence to return to countries where little has been heard of their new career.

In an attempt to meet this challenge, the discipline has adopted a number of strategies.

The problem based learning approach used in the discipline has had both positive and negative effects for these students. However, it is largely because of this approach that the students have been able to share their experiences and learn from others how they may achieve their goals of learning.

They have looked at the health situation within Nepal, using the principles gained



Nepali Student, Ms Amita Shrestha, pursues her studies in Occupational Therapy.

during their studies and have been able to identify areas of application of the process of occupational therapy. They have also been able to recognise specific target areas for possible future development. Nepal is a largely rural setting and the students focused on working within already established areas of occupational therapy presence.

Most would believe that occupational therapy has little role, if any, in providing assessment and treatment intervention in, for example, Nepal or Vietnam.

Throughout their studies, the students have designated to them an academic

mentor who is available for consultation on any academic and clinical matter. This has allowed all to develop unique relationships. The students have also been involved in a communication group which assists all students with interpersonal communication skills and, in particular, the impact of cultural contexts on the therapeutic relationship.

A lecturer in the discipline recently visited Nepal to explore the avenues that may exist for the profession of occupational therapy and to facilitate the future development of occupational therapy positions.

The Nepali students had already identified many areas of concern from mental illness, which is treated by imprisonment in gaols, to rehabilitation for physical disability, which is almost non-existent. Visits to these areas of need challenged the

occupational therapy lecturer to identify the possible occupational therapy role in working with leprosy patients, patients with a mental illness who are being released from prison, adults and children with physical disabilities, community education and primary health care. A role in the development of community based rehabilitation of the British Gurkhas in Nepal was also identified.

THE PROBLEM OF YOUTH SUICIDE

by Dr Philip Hazell, Psychiatry

In a recent survey of OECD nations, Australia headed the list for the incidence of suicide (deaths per 100,000 population per year) amongst its youth.

Although the OECD list omitted some countries such as Hungary, Finland and New Zealand, which have even higher rates, that does not detract from the tragedy of these unavoidable deaths.

Suicide is still more common among older people than among the young but, relative to other causes of death, it is among the young that suicide becomes so important. It is now the leading killer of young males. Reduction in youth suicide rates has been identified as an important health goal within Australia. An important concern is whether policies developed to address the problem will be sufficiently informed by current knowledge.

Australia is experiencing a trend in youth suicide rates that was first seen in the northern hemisphere about 15 years ago. A previous wave of youth suicide was observed in Europe earlier this century, and was a subject of discussion by Freud and fellow members of the Psychoanalytic Society in Vienna.

The Society expressed concern at the epidemic of suicide that seemed to have affected high school students. It is sobering to consider that we really understand little more about the reasons for suicide than did our Viennese colleagues 80 years ago. While there are well-recognised correlations between suicide and depression, substance abuse and family trauma, the reason why some individuals with these risk factors will attempt suicide (while most do not) remains a mystery.

There exists a division between those who emphasise social causation such as unemployment and marginalisation, and those who emphasise psychological and biological factors such as mental illness and deficiencies in the inhibitory neurotransmitter serotonin. Research is hindered by the relatively low base rate of suicide, since suicide is still an uncommon event, and since suicidality is usually a transient state. Any instrument used to detect

suicidality must be extremely accurate otherwise far more people will be falsely identified as suicidal than will those who are truly in danger. Unfortunately, the field is not known for its precision.

Most agree that research into suicide should be directed to individuals at greatest risk. One such group is suicide attempters. Although few attempters eventually die from suicide, psychological autopsy studies have demonstrated that most people who die from suicide have made at least one previous attempt.

The Newcastle Mater Hospital Clinical Pharmacology and Psychiatry teams have been collecting systematic information on all self-poisoners for the past eight years. While the researchers freely acknowledge that self-poisoners who present to hospital may not be representative of the total population of suicide attempters, their data base has already yielded some important information. They have, for example, identified one antidepressant drug to be significantly more toxic in overdose than most other antidepressants, suggesting clinicians should be very cautious in prescribing this treatment to high risk individuals. They have also found the relative risk of overdose on medications prescribed for emotional disturbance to be much higher amongst young people than it is amongst the elderly. This may also lead to a change in prescribing habits, since clinicians have tended to be more conservative in their prescribing to the elderly, because they have higher death rates from suicide.

A different approach to the study of suicide attempters is being developed collaboratively by the Faculty of Medicine and Health Sciences Disciplines of Psychiatry and Community Paediatrics. Researchers are establishing a surveillance network to capture all episodes of self-harm amongst young people in the rural Hunter and Macquarie regions, in an attempt to gain a

more representative sample of suicide attempters. Data from this study will provide information about the extent of clustering in suicide attempts (the phenomenon by which suicidal behaviour in one individual influences suicidality in others), patterns of suicide attempting in terms of method, location season etc, and the effects of any intervention programs introduced to the respective areas. This project is modelled on injury surveillance methodology, and has the capacity to detect changes in patterns of suicidal behaviour substantially sooner than traditional methods such as hospital discharge data.

Suicide has not been appropriately acknowledged as a significant public health problem. There is pressure to identify strategies that may reduce the suicide rate, especially amongst the young. Research is being undertaken in Australia, and there have been contributions from the University of Newcastle and the Hunter Area Health Service. There are significant methodological and ethical issues to be addressed in suicide research. It is important that policy makers take these factors into account when translating research findings into suicide prevention strategies.

Dr Philip Hazell.





THE CENTRE FOR HEALTH LAW, ETHICS AND POLICY

by Professor Neil Rees, Dean, Faculty of Law

One of the great advantages of university life is the opportunity to bring together people from difference disciplines with interests in overlapping fields of study.

The recently established Centre for Health Law, Ethics and Policy is a multidisciplinary centre based within the Faculties of Law, Medicine and Health Sciences, Science and Mathematics, and Nursing, with significant links to the Departments of Psychology, Philosophy, Sociology and Social Work.

The centre was launched at a public lecture in Newcastle on June 6, 1994 by the President of the NSW Court of Appeal and former Deputy Chancellor of The University of Newcastle, the Hon Justice Michael Kirby. In his lecture, entitled "Genes and the Law: Do They Mix?", Justice Kirby provided an overview of a recent conference in Bilbao, Spain which dealt with the legal aspects of the Human Genome Project. As Justice Kirby noted, the legal and ethical implications of the Human Genome Project have received little attention in Australia.

The centre sought to redress this problem by inviting to the University, Dr Eric Juengst, the former Head of the Ethical, Legal and Social Implications Branch at the National Centre for Human Genome Research in the United States. During his recent visit to Newcastle, Dr Juengst delivered a public address about his work at the National Centre for Human Genome Research and he participated in a workshop with academics to consider the broad social implications of genetic intervention.

Dr Eric Juengst, from the National Centre for Human Genome Research in the United States.

Inset: Professor Neil Rees, Dean of the Faculty of Law and Chair of the Board of the Centre for Health Law, Ethics and Policy.



The new centre's Board of Management includes the Vice-Chancellor, the Deans of the Faculties and the Heads of Departments in which it is based, the Chief Executive Officer of the Hunter Area Health Service and a representative of health consumer groups.

As Dean of the Faculty of Law, I am the current Chair of the Board and Acting Director of the centre. Prior to joining the staff of The University of Newcastle in 1991, I was President of Victoria's Mental Health Review Board and Chair of its Psychosurgery Review Board.

The centre proposes to conduct research in the fields of health law, ethics and public policy, to contribute to public debate about these matters, to develop graduate and undergraduate subjects in health law and ethics and to provide independent consultancy services in policy development to government, the health industry and health consumer groups.

The centre has commenced a major consultancy for the Commonwealth Department of Human Services and Health. That department, acting in cooperation with the Australian Health Ministers' Advisory Council National Working Group on Mental Health Policy, has commissioned three consultants working at the centre (myself, Dr Leanne Craze and Ms Kim Ross) to develop draft national mental

health legislation based on the United Nations Principles for the Protection of Persons with Mental Illness and for the Improvement of Mental Health Care.

In late July, 1994, the Centre and the Australian Consumers' Council hosted a two day workshop to consider the preparation of a national Charter of Rights for Health Consumers. Participants at the workshop included representatives of national health consumer groups, the Health Services Commissioners from Victoria, NSW and Queensland, representatives of professional organisations and academics. Ms Anna Coote, Director of the Social Policy Program at the Institute for Public Policy Research in London, attended the workshop to inform delegates of the United Kingdom experience of a Charter of Patients' Rights. Delegates at the workshop resolved to work towards the creation of a National Health Consumers' Charter.

Few people would disagree with Justice Kirby's assertion that "the most powerful social force of our time is science and technology". He has called for new institutions which promote "more dialogue between scientists and the community, and scientists and lawmakers". In its short existence the Centre for Health Law, Ethics and Policy has contributed to the development of that dialogue at this University.

RESEARCH AND REFORM IN RECENT FAMILY LAW

by Professor Frank Bates, Law

During the last five years, I have been involved with a variety of projects which are, or have been, central to the development of modern Australian family law.

The two with which I have been most recently concerned have been the relationship between child sexual abuse and the fact finding processes used traditionally in the law and a revision of the ways in which the relationship of parent and child should be viewed after parental separation.

From July 1990 to July 1993 I was a member of the Family Law Council, a body created by s115 of the Family Law Act 1975 and, in consequence, was a member of a committee which was to inquire into existing patterns of parenting, particularly in relation to post-separation, and to develop models of cooperative parenting with a view to indicating legislative and other changes which might be necessary to protect the welfare of all concerned people.

The first conclusion which we were able to draw was that children, after parental separation, do want and need contact with both of their parents. In fact, it does seem that contact decreases over time and this has seriously deleterious consequences for children. At the same time, however, the committee was inevitably aware of situations where access, as the term is presently used, would be wholly undesirable.

Again, the committee examined research which suggested that post-separation parenting decisions are most likely to be made in the interests of children if parents feel that they are in control of their own futures and can make decisions within a structured framework. A part of that framework is the language in which the present law is couched. That was regarded by the committee as being of especial importance - words such as 'custody' and 'access'

carried with them connotations of the law of property and crime.

In urging that these terms cease to be a part of modern Australian family law, the committee was assisted by changes wrought in the United Kingdom by the Children Act 1989 which statutorily refers to the notion of parental responsibility - not *right*. That legislation has also sought to abolish the, verbal at least, ideas of 'custody' and 'access'.

Children, after parental separation, do want and need contact with both of their parents.

In that context, the committee took the view that post-separation cooperative parenting is a desirable goal and that existing terminology reinforces notions of

children as property and discourages ongoing parental responsibility. A way in which this could be achieved, the committee thought, was by the use of parenting plans as had been used in various North American jurisdictions. Committee members agreed to seek the authority and responsibility of each parent and to minimise the child's exposure to potentially harmful conflict. These plans would normally be set out in a manner which permitted the parents freely to choose the level of responsibility they intended to adopt for their children after separation. They would also be flexible and capable of easy alteration so as to meet the needs of the child.

The ultimate report, *Patterns of Parenting After Separation* (1992), has had considerable impact: most importantly, it has provided the basis for the Family Law Reform Bill 1994 which seeks to make

significant changes to the Family Law Act concerning disputes involving children. That Bill has the object of ensuring that children receive adequate and proper parenting to help them achieve their full potential and, also, that parents fulfil their duties and responsibilities in respect of the care, welfare and development of their children.

All of this shows that academic research and actual legal change in Australian family law are very closely connected and I am happy that I, and the Newcastle Faculty of Law, could be a part of it.



Professor Frank Bates, member of a committee which provided the basis for the Family Law Reform Bill 1994.

A HELLISHLY DIFFICULT TASK

In addition to teaching law students for the Bachelor of Laws degree, staff of the Faculty of Law have a heavy teaching commitment in other faculties.



Professor Warren Pengilley (l) and Mr John McPhee (r) amidst copies of their book, Law for Aviators.

One lesser known of these commitments is teaching Aviation Law, a component unit in the degree of Bachelor of Science (Aviation). This course was previously presented by Mr John McPhee, lecturer in Law, and for the past two years has been presented by Professor Warren Pengilley, the Sparke Helmore Professor of Commercial Law.

Together they have recently (October 1994) published a 590 page text entitled *Law for Aviators*. The text is the first of its kind to combine general law principles with those specific to aviation. The authors stress that it is a book addressed to aviators - those who fly - not to lawyers, though they believe that lawyers could also learn from it. It is fitting that the text is the first in the market. Although a number of tertiary educational institutions now offer degrees in aviation, Newcastle was the first university to do so. The book thus retains Newcastle's "first" in the aviation world.

The book is not one about how to fly a plane. It is about the law as a background to aviation experience. So, for example, the authors discuss in one chapter the law of negligence. In the next, they give examples that are colourful and will excite the interest of aviators: pilots being sued for flying too low; air traffic controllers sued for not taking steps to avoid mid air collisions; and details of a litany of aircraft accidents in airports as far spread as Detroit, Denver, Athens, Fort Worth, Washington, Warsaw, Tenerife, Taipei, Nairobi and Madeira. And if you really want to know the true story of why the Russians shot down KE007 over the Kurile Islands in 1983, you'll also find this in the text.

One reason for the absence of a book of law for aviators to date is that it is a hellishly difficult task to locate, let alone summarise, the applicable legislative provisions covering aviation law.

So the text has more than colourful stories. For example it includes a 130 page summary of relevant international conventions and all Commonwealth and NSW legislation relating to aviation.

The operations of the Federal Airports Corporation are dealt with, as is the method by which the RAAF keeps civil aircraft from colliding with its FA18s. It even has the regulations which exempt the British Royal Family from Departure Tax, and tips on self preservation for pilots:- when can a cockpit recording be used in evidence? What are your rights if you have a licence cancelled or suspended? Where can you appeal?

This book demonstrates how a Faculty of Law can interact with other disciplines in the University to their mutual benefit.

THE MEREWETHER TITLE: PROPERTY LAW MADE EASY

by Mr Michael Stuckey, Law

Studying property law without immediate reference to the documents is much like trying to study anatomy without access to a body.



Michael Stuckey with documents from *The Merewether Title*.

That is why I decided to produce a new type of text for students who would study property law for the first time in 1994.

First it was necessary to find a "chain of title" (a set of documents relating to a particular property) which could illustrate all the different types of transactions - conveyances, leases, mortgages and so on - which typically affect land. The Newcastle firm of Sparke Helmore was able to assist by locating such a "chain", stemming from the famous Merewether estate which once made up the greater part of modern day suburban Newcastle.

Although the original estate covered a little over 1400 acres, the documents reveal how, since 1835, the land was gradually divided and subdivided, conveyed, leased and mortgaged. *The Merewether Title* spotlights one particular quarter-acre of land in the eponymous suburb of Merewether. The documents also show the incorporation of the land from the "old system" of conveyancing into the modern Torrens system of registered title and most recently the erection of three villa units under Strata title.

So far as students are concerned, *The Merewether Title* provides a new perspective on a subject which has hitherto often been regarded as difficult and dry. In the

past, the great majority of property law classes taught by Australian law schools have included no detailed examination of the documentary basis of the transactions involved in the creation and enforceability of proprietary rights. In this book I aim to fulfil that want by providing the necessary examples for a student of property law to actually see the crucial documents.

The Merewether Title sets out, document by document, a history of the proprietary interests in a typical residential property. All the documents are reproduced in their actual size and form and are interleaved with commentary by the author.

While the reproduction of these documents has posed some problems, it was really necessary. The whole idea was that students should have easy access to the raw materials of property law - not just a sanitised recapitulation of arid legal principles.

The Merewether Title is a kind of practical manual designed to complement their theoretical knowledge. Up until now many new law graduates would turn up to their first job as a solicitor and not even know what a deed of conveyance looked like. I hope that this book can give the student a solid basis for understanding the functional realities of property law.

SEEKING REDRESS FOR HARSH BARGAINS

by Ms Anne Finlay, Assistant Dean, Faculty of Law

The failure of small business, because of harsh contracts, carries social and economic costs. If it is determined that in some circumstances parties in business owe duties beyond honesty towards the other, how should these duties be imposed? The ability of business, especially small business, to invoke the equitable doctrine of "unconscionability" in this instance is the subject of my Master's thesis and on-going research.

To date there has been an ad hoc approach

to setting standards of commercial fairness by the Parliaments which have determined that duties of fairness are owed in certain commercial dealings. Thus, there is intervention in particular industries where there have been complaints of harsh behaviour, such as petroleum retailing and shopping centre leases. Another approach has been to nominate particular problems to be redressed such as unfair attempts to limit liability.

Although there were calls for the Con-

tracts Review Act 1980 (NSW) to include relief generally to small business, this was not forthcoming. Similarly, the 1992 widening of the unconscionability provisions of the Trade Practices Act 1974 (Cth) did not greatly enlarge the scope for business to seek redress for harsh bargains. Outside the supply of consumer goods and services, where there is the ability to examine the terms of supply themselves, relief is derived from the equitable doctrine which depends on a finding of "special

ON THE JOB TRAINING FOR LEGAL STUDENTS

by Mr John Boersig, Law

The opening of the Newcastle Legal Centre later this year will be a significant step in the development of clinical legal education in Australia.

The intensive clinical component of the University's Bachelor of Laws course, the Professional Program, commences next year. The integration of legal skills training and experiential learning into the law course is unique to Newcastle.

Law students who enter the Professional Program will undertake intensive skills training. This training will be carried out through classroom teaching, simulated exercises and supervised placements. The students will bring their academic knowledge to these placements, and return to the formal teaching environment to reflect upon their experiences in legal practice.

At the heart of the Professional Program is the University's legal aid clinic, the Newcastle Legal Centre. The legal centre will provide many of the supervised placements for law students enrolled in the Professional Program. Lawyers at the legal centre will conduct a legal practice and teach students the skills required of legal practitioners.

Members of the public will attend the

legal centre on an appointment basis, where they will be interviewed by students. The students will then consult their supervising lawyer, conduct appropriate legal research and return with the lawyer who will advise the client. All legal advice will be given by qualified practitioners. Students will assist in the conduct of legal matters by undertaking tasks such as the preparation of documents and the gathering of evidence.

The legal centre will operate as a community legal centre, providing advice and assistance to disadvantaged members of the community. The legal centre will focus on areas traditionally associated with community legal centres such as criminal law, family law, consumer protection and equal opportunity.

The lawyers employed at the legal centre have many years experience, with particular expertise in legal matters relevant to the Newcastle community. It is expected that the Newcastle Legal Centre will greatly enhance the legal services already offered

to the community by private practitioners and the Legal Aid Commission.

The legal centre will be open each weekday, and it is expected that evening advice sessions will commence in 1995. It will operate from premises at the corner of Tudor Street and Maitland Road, Newcastle West, pending refurbishment work at University House in King Street, Newcastle.

John Boersig from the Faculty of Law: the Newcastle Legal Centre will commence sessions in 1995.



disadvantage". This has the effect of excluding most commercial plaintiffs from the ambit of the legislation.

One of the problems with using the notion of "unconscionability" in the commercial arena was identified by the Trade Practices Commission in its 1991 report on the subject as being the difficulty in distinguishing between morally reprehensible conduct and that which is merely commercially opportune. The report instanced low prices offered to rural producers when they have little choice but to sell and suggested this is likely to be explained by the theory of supply and demand. The

report said that, if this ought to be controlled, it should be through government regulated floor prices rather than through the Trade Practices Act which has as its main object the promotion of competition through market forces.

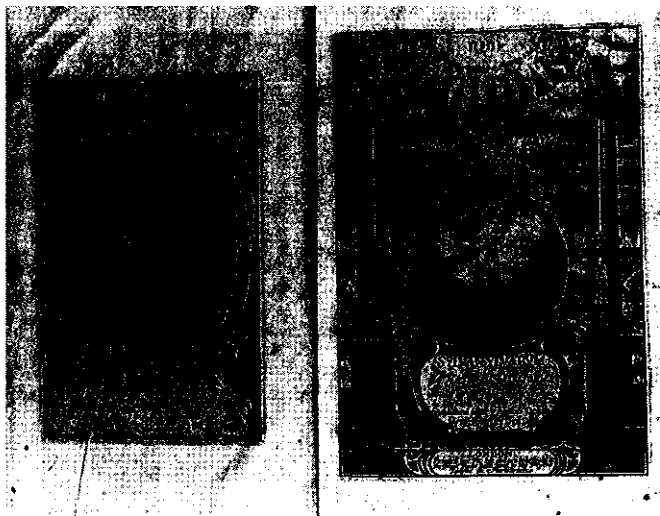
The United States Commercial Code provides one model for a general legislative approach to unconscionable behaviour. The section draws no distinction between consumers and commercial parties and it has been invoked by commercial plaintiffs but it has also been criticised by many academic commentators for lacking a rigorous methodology.

Outside the statutory area there is some scope for commercial parties to seek relief from the courts where there is unconscionable conduct involved. This is seen in the developing areas of economic duress, relief against penalties and forfeiture, estoppel and mistake. An examination of the cases suggests some courts are grappling with standards of commercial morality even if this is not clearly enunciated or defined. This does open the potential for tension between notions of freedom of contract and the aims of vigorous competition on the one hand and the protective reaching by the courts into the world of commerce on the other.

RENAISSANCE BOOKS AT THE AUCHMUTY

by Dr Peter Holbrook, English

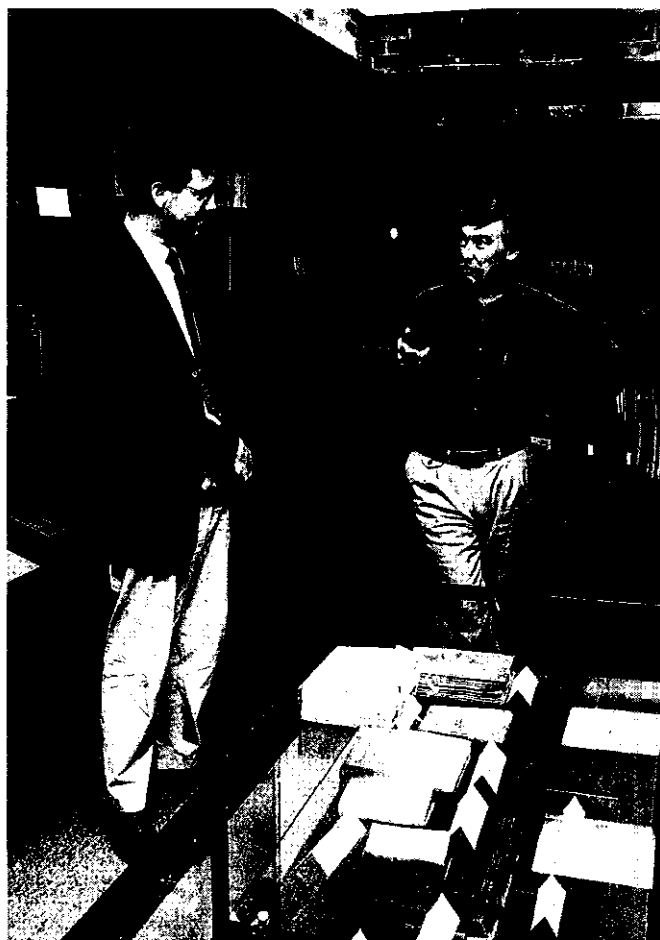
The University of Newcastle now has a significant collection of books printed in the Renaissance, with the recent establishment of the Auchmuty Renaissance Book Collection.



The collection, comprising books printed between 1558 and 1649, brings together items already held by the library and others newly purchased through the bequest established by Reta Light. The collection will support research and teaching in the Renaissance, and has been planned with advice from the Early Modern European Studies Group, which sponsors research in the history, literature and thought of Europe from 1500-1800. The collection will be of interest to anyone undertaking research into 16th and 17th century Europe.

Bibles, theology and religious polemic will obviously feature prominently in a collection devoted to an age of religious turmoil.

The books (35 in total, most of them in English) are extremely various, both as to content and physical appearance. Together they give an excellent picture of the kinds of publications available to readers in the age of Shakespeare and Milton. Bibles, theology and religious polemic will obviously feature prominently in a collection devoted to an age of religious turmoil. A splendid example of this type of book is John Foxe's "Book of Martyrs" (1576), a massive work of Protestant propaganda. One of the most widely read books ever printed in England, the work contains elaborate woodcuts depicting the torments of Protestant martyrs persecuted under the reign of Queen Mary. Other items include "Steps to the Temple" (1648), devotional verse by the Catholic poet Richard Crashaw; an Italian grammar published in 1575; a 1649 "herbal" or botanical treatise; a Puritan petition to Queen Elizabeth from 1588; a farming manual "for the true ordering, manuring, & enriching of all the Grounds within the Wealds of Kent and Sussex" (1649); a study of



Dr Peter Holbrook (l) with Librarian Mr Bill Linklater (r) at the launch of the new Renaissance Book Collection in the Auchmuty Library. (2) The inside cover of one of the books in the new collection.

"The Priviledges of the Baronage of England" by the antiquary and legal scholar John Selden (1642); and a tragedy, "The Maides Revenge", by the Caroline playwright John Shirley (1639). One of the most charming and beautifully printed books in the collection is the "Itinerary" (1617) of Fynes Moryson, which records the author's "Ten Yeeres Travell" through such countries as Germany, Italy, Poland, Turkey and Russia. As well as describing the customs and conditions of life in these countries, Moryson also provides such practical information as exchange rates and the standard of accommodation to be expected at inns.

Anyone wishing to be shown the Auchmuty Renaissance Book Collection should contact either Peter Holbrook in the Department of English or Elizabeth Guilford in the Auchmuty Library.

LET'S TALK ABOUT FAT

by Ms Gay McDonell, Nutrition and Dietetics

How many grams of fat have you consumed today? Are you guilt ridden when you reach for that comforting chocolate bar? Do you know or even care about cholesterol, saturated, polyunsaturated and monounsaturated fats?

These issues may sound familiar if you are one of the 1000 members of staff who responded to a questionnaire in July this year. The questionnaire is part of my Masters of Science (Nutrition & Dietetics) research program, with joint supervision from Dr Christina Lee (Psychology) and Professor Dave Roberts (Nutrition and Dietetics).

The questionnaire was designed to study several areas that relate to fat consumption - knowledge, attitudes, behaviour, stages of readiness to change and barriers to change.

Research indicates that the current levels of fat in the Australian diet are too high and that changing dietary habits requires knowledge, skills and motivation. Translating the recommendations of health professionals into simple messages for average consumers to follow has not been generally successful. Confusion about types of fats, fat content of foods and food labelling claims have caused widespread anxiety and distrust towards nutrition messages.

The chart (opposite) shows the distribution of answers from the 1081 respondents to my survey. The mean score was 6.4. Only 30 people scored the maximum of 11 correct answers. While some questions were well answered, many other questions demonstrated the misconceptions about dietary fats, especially with regard to labelling claims.

Food is near and dear to many people's hearts, and many of the responses in the open ended section of the questionnaire revealed some of the barriers to reducing fat in one's diet.

"I love food and I am lazy."

"My biggest weakness is bread and butter and I love cheese!!!"

"I could make further sacrifices, but I might die of boredom!!!"

Busy lifestyles and the constraints of certain living arrangements are also not conducive to changing to a low fat diet for many people.

"I am too busy to bother and work too late to care."

"My lifestyle is such that I literally have to eat what I can lay my hands on - fatty or not!"

"My wife doesn't see the need."

Many people feel they lack the knowledge and skills to successfully change their diets.

"The knowledge spread by the media does not give one a comprehensive or non-conflicting picture of the issues involved."

"It is difficult to make an informed decision about products when there are inadequate explanations about contents."

The next step in this project is to conduct some more sophisticated analyses of the data and then to design an intervention strategy to focus on education and specific skills training to enable consumers to make practical and informed changes to their dietary habits.

Answers to the Nutrition Knowledge section of the questionnaire and the percentage of responses for each answer option. The answers appear in bold type.

1. Saturated fats are usually found in:
 - a. **Animal products like meat and dairy products** 89%
 - b. Vegetables and vegetable oils 2%
 - c. Not Sure 8%
2. Polyunsaturated fats are usually found in:
 - a. Animal products like meat and dairy products 3%
 - b. **Vegetables and vegetable oils** 89%
 - c. Not Sure 8%
3. Which kind of fat is likely to be liquid rather than solid form?
 - a. **Polyunsaturated fat** 50.5%
 - b. Saturated fats 3.5%
 - c. Both types of fats are equally likely to be liquid 23%
 - d. Not Sure 22%
4. Which kind of fat is more likely to raise people's blood cholesterol level?
 - a. Polyunsaturated fats 1%
 - b. **Saturated fats** 90%
 - c. Not Sure 8%
5. Which kind of fat is higher in kilojoules?
 - a. Polyunsaturated fat 1%
 - b. Saturated fat 30%
 - c. **Both the same** 43%
 - d. Not Sure 25%
6. Cholesterol is the same thing as:
 - a. Polyunsaturated fat 1%
 - b. Saturated fat 30%
 - c. **Neither** 68%
 - d. Not Sure 18%
7. If a food is labelled cholesterol free, then:
 - a. It must be high in saturated fats 1%
 - b. It must be low in saturated fats 47%
 - c. **It could be either high or low in saturated fats** 35%
 - d. Not Sure 17%
8. If a product is labelled as containing only vegetable oils, then:
 - a. It is high in saturated fat 1%
 - b. It is low in saturated fat 53%
 - c. **It could be either high or low in saturated fat** 29%
 - d. Not Sure 17%
9. If a fat or oil has been hydrogenated, it has become:
 - a. **More saturated** 18%
 - b. Less saturated 24%
 - c. Not Sure 58%
10. Cholesterol is found in:
 - a. **Animal products like meat and dairy products** 84%
 - b. Vegetables and vegetable oils 1%
 - c. Not Sure 15%
11. Monounsaturated fats are generally:
 - a. **Good for you** 49%
 - b. Bad for you 8%
 - c. Not Sure 43%

INSPIRED WITCHCRAFT?

"The long standing tradition of excellence in teaching, training, and research in anaesthesia and intensive care in the Hunter Region was recognised by the Faculty of Medicine at the University of Newcastle with the establishment of the Chair in 1990."

When Professor Geoff Cutfield made this statement during his inaugural lecture in September, he was doing what many of us would love to have the opportunity of doing - answering a question posed during a job interview, which had left him tongue-tied. "I faced a committee of 18, stumbling through the majority of questions such as 'Why Newcastle?' 'What are your comparative teaching experiences?', 'Do ya get on with surgeons', and many others, until the penultimate question came. 'Anaesthesia and intensive care, hardly a mature academic discipline would you say? Would you enlighten the committee on how your appointment to this Chair might contribute to the maturation of this fledgling discipline?' That question, the highly esteemed colleague who asked it, and my ineffectual response to it, have remained etched indelibly in my memory since that day," Professor Cutfield said.

While admitting that his specialty was "150 years young", Professor Cutfield said that anaesthesia and intensive care can legitimately claim to be a mature academic discipline. In October, 1846, in a crowded lecture theatre at Massachusetts General Hospital, a young dentist named Morton demonstrated the administration of ether to permit surgery without pain and anaesthesia came quickly to the Hunter Region. A young doctor named Colin Buchanan carried out what is believed to be Australia's first etherisation in Stroud in 1847, successfully performing surgery on a life-threatening aneurysm, with the patient observing on waking that he had not felt the slightest pain.

From these historic moments, Professor Cutfield explained, a fascinating history unfolded. In the early days, anaesthesia was under the control of the operating surgeon and was usually performed by an intern (or dresser). Despite a mounting tide of deaths associated with anaesthesia, particularly the use of chloroform, the

appointment of full time anaesthetists as specialists did not begin until 1884. The teaching of anaesthesia to undergraduate medical students followed, introduced with urgency in the wake of increasing numbers of deaths associated with the administration of anaesthesia by very junior practitioners under less than adequate supervision.

In Newcastle, the employment of a Director of Anaesthetics and the establishment of a formal hospital department occurred in 1948, with the appointment of Dr Ivan Schalit, who co-opted two rooms adjacent to operating theatres for peri-operative care. "He pioneered the recovery room a full seven years before any were established in metropolitan teaching hospitals, in this country or any other," Professor Cutfield said. "His contributions to training and to Newcastle's reputation for a sustained contribution of excellence in thoracic surgery are noted."

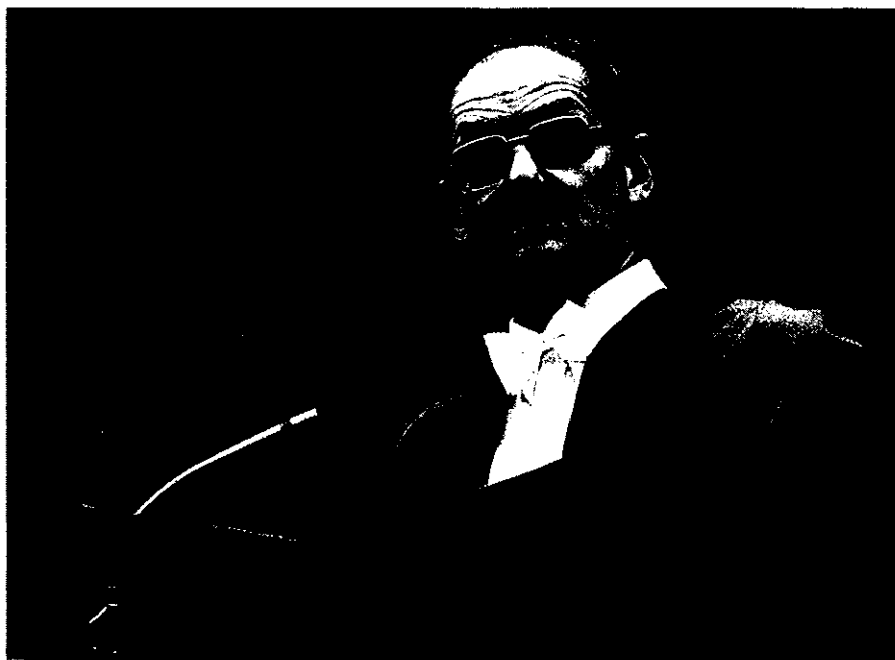
The challenge, Professor Cutfield continued, is to build on the achievements of our forebears in the Hunter, "to create an environment to justify the confidence of our community and our University's continuing support of an academic depart-

ment of anaesthesia and intensive care".

"Befitting an academic discipline, the philosophical basis of our discipline is not fixed and immobile, but sensitive to its context and relevant to its circumstances. In a contemporary sense we might state it as the pursuit of knowledge, understanding and skills, to enhance our care for our fellow beings with life threatening illness and for the alleviation of suffering. We have the intellectual confidence then to state what we believe to be true and to test that of which we are uncertain. That, I believe, is the mark of a mature academic discipline. Moving beyond traditional doctrines, daring to think laterally and explore unexpected findings is the basis for future growth."

Those who were fortunate enough to attend Professor Cutfield's Inaugural Lecture, entitled "Anaesthesia and Intensive Care: Mature Academic Discipline or Inspired Witchcraft?", would agree that he had more than compensated for his "ineffectual response" to this haunting question in his job interview.

Professor Geoff Cutfield



MATURE AGE STUDENTS IN ANTIQUITY

Most Australian academics today value their mature age students as a dedicated and hard-working group, whose greater experience of life enhances their facility for evaluating issues.

But do mature age students face discrimination due to their age? Professor Harold Tarrant, marked his appointment to the University's first Chair in Classics, with a lecture about mature age students in which he explored the problems they face by examining attitudes in the ancient world.

Delivering his Inaugural Lecture (entitled "Learning Late: Prejudice and the Mature Age Student in Antiquity"), Professor Tarrant said classicists do not claim to have the key to the social problems of 20th century Australia. "But we do claim to have a role to play alongside other disciplines in helping human beings to understand themselves and the society in which they operate within the broader spectrum of human history," he said.

"love of effort exceeding what is appropriate to one's age".

Professor Tarrant took his audience on a journey back in time some 2,400 years to ancient Greece. Theophrastus, the pupil and successor of Aristotle, referred to the "late-learner" in his book, *Characters*, which is generally acknowledged to be linked with ancient comedy. His discussion of this character is preceded by a definition of late learning as a "love of effort exceeding what is appropriate to one's age".

Theophrastus mocked the acquisition late in life of knowledge or skills that were not particularly impressive. Professor Tarrant however, chose to concentrate on those who were learning at a higher level, in studies with sophists, philosophers and others who brought new branches of learning into the traditional curriculum.

The study of philosophy, in particular, in middle age was regarded as immature. However Plato did not disapprove of continuing studies late in life, Professor Tarrant revealed. "Book VII of his most spectacular work, the *Republic*, does not allow the ruling class of the city-state to devote themselves to the final stages of



Professor Harold Tarrant

his philosophic curriculum until the age of fifty," he said.

Professor Tarrant said Socrates, however, had reservations about his own ability to learn things decorously at an advanced age. The portrayal of the character, Socrates, in the role of late-learner and as a gerontoprofessor (old man teacher) in two comic plays staged in 423 BC, raises the question of what he was doing in the realm of mature age studies that attracted such attention at that time. Professor Tarrant believes the answer is suggested in Plato's dialogue, *Laches*, in which Socrates affirms that young and old alike ought to find the best possible teacher of courage and virtue. "They need to cure their ignorance at any cost, and if others laugh at them because of their age they should not be shamed into going away," Professor Tarrant quoted.

While prejudice against late-learners continued, and probably continues today, it was tempered in late antiquity by sayings

such as the Pythagorean assertion that some things were better learnt late (such as the arts of love-making), and that attributed to Socrates that it is better to be a late-learner than a non-learner. Those still harbouring doubts about the potential of older people to pursue their studies would do well to take note of the "genuinely enlightened attitude" found in the Epistles of the 4th century AD man of letters Libanius, which Professor Tarrant quoted in conclusion.

"You must treat him like I would have done if he were taking my courses. I don't ask for good will, which you obviously adopt in all cases, but that he may learn a lot in a little time. For to those who come late to studies, and put up with jests at their expense, this is the appropriate gift from their teachers, continuous progress and an eagerness which adds speed to their art."

ENVIRONMENTAL ATTITUDES IN THE WOLLOMBI VALLEY

The beautiful and historic Wollombi Valley and the field of environmental education were the inspiration for Dr Denis Mahony's PhD research project.

Dr Mahony became intrigued by the widely different appreciations people express of particular landscapes. For example, a blue gum forest may be seen as a living community of plants and animals or as a timber resource; as an object of scientific study or as a recreational opportunity.

In the Wollombi community he observed this mix of attitudes in vigorous debate over local issues:- the status of wombats; the environmental impact of cattle; stream erosion and harvesting native timbers.

Dr Mahony studied the way in which people understand and relate to their environment.

"Before starting field research, I conducted two historical surveys," he said. "The first identified the successive waves of occupation in the Wollombi Valley, from the long period of Aboriginal occupation through to the period of pioneer mixed farming, through the staple dairying era to the contemporary mix of new settlers, mining and land dedicated to National Parks and State Forests."

"Then I studied the growth of conservation values in the valley, influenced by the impact of severe flooding and participation

in the wider environmental movement."

A qualitative methodology was used: unstructured interviews with landowners; observation of community meetings; and documentary studies of local records.

Four environmental "positions", were identified. They were named: Men of the Land, Earth People, Other Agenda Folk and Unaligned Individuals. Each position was intuitive, experiential, holistic, value-laden and compelling.

These positions contrast sharply with the usual expectation of a single body of transferable knowledge which is expert-derived, reasoned and readily analysed.

"Identifying these special ways of knowing the environment is particularly

significant for attempts to deal with the critical problems of declining water quality and land degradation now recognised in Australia," said Dr Mahony. "The current government approach - encouraging cooperative response - will need to acknowledge the force of such entrenched positions and be prepared to deal positively with a high level of contestation."

Environmental positions could also be very important for environmental education programs in schools, he said, if further research confirms their existence there.

Dr Denis Mahony (4th from left) and students replanting rainforest species on Arbor Day earlier this year.



UNIVERSITY GETS ITS OWN FANFARE

Associate Professor Robert Constable was the winner of the Vice-Chancellor's competition to compose a special University Fanfare. Professor Mortley invited staff and students to submit entries which were then judged by a committee headed by the Dean of Music, the late Professor Michael Dudman.

The winning entry has already been performed at graduation ceremonies here and in Singapore.

Associate Professor Constable said he

was constrained in his composition by the features of graduation ceremonies and other ceremonial occasions. "It had to be sufficiently solemn to set the mood for such occasions but I was also limited by the length of time it takes for the full academic procession to enter the Great Hall, usually over two minutes," he said.

"There were also other factors of a technical nature to consider, especially those concerning the brass instruments and the acoustic environment of the Great Hall. It

was this last matter that led me to avoid the tuba and the french horn and to select only trumpets and trombones which have a greater power and a more 'cutting' sound.

"The result is a short walk which is bright and predominantly in major keys (rather than minor), and in which the trumpets have ample opportunity to display their characteristic fanfare-like quality."

The fanfare is scored for three trumpets, two trombones, timpani, cymbals and organ.

SOFTWARE FOR PROFESSIONALS WHO LEARN FROM PRACTISE

A revolutionary computer software package, developed at the University of Newcastle, is set to dramatically change the way doctors are trained, the way they learn, and ultimately the way they continue to learn once they are in practice.

The software, to be known as SOLID (Student Own Learning Informatics Diary), is the result of a collaborative project involving Dr Jean McPherson and Ms Wendy Swinkels from the Faculty of Medicine and Health Sciences, and Professor John Parboosingh from the Royal College of Physicians and Surgeons of Canada and academics from the University of Ottawa.

Professor Parboosingh, who visited the University last month, said that the software is designed to help students at the early stages of their careers to identify what it is that they are learning when they attend a patient, help identify learning objectives and then develop personal learning projects that would help meet those objectives.

"This is the very first software of its kind," Professor Parboosingh said. "We think it has the potential to be used in any profession that learns from practise - whether it's lawyers, doctors, or even motor mechanics for that matter - to help them identify what it is they're learning and to provide them with a means of storing and searching their learning activities."

Professor Parboosingh said that at present what students have tended to record is what they've learned rather than how they've learned it. "We believe that teaching students to ask the question 'how did I learn this?', is an essential component in developing skills of lifelong learning." It is this kind of questioning, he said, that would enable a doctor or other practitioner to identify what it was that they needed to know to keep their practices up to date.

SOLID is currently being used by 400 doctors in Canada, 35 of whom are regularly sending Professor Parboosingh their files via e-mail. It is soon to be introduced to fourth year medical students at the University of Newcastle. Dr McPherson and Ms Swinkels will then carry out follow-up research as the graduates move

into their internships to see how they use the software as they begin to see patients. Because it is only in its infancy, the continuous feedback both here and in Canada will help refine and modify the program as needed.

"We believe that teaching students to ask the question 'how did I learn this?', is an essential component in developing skills of lifelong learning."

The software works something like this:

A doctor, for example, may see 20 or 30 patients in a day. At the end of the day she or he may note that they have a problem with a particular patient or they may feel they need to do some reading in a particular area. They may then decide that they would like to develop a personal learning project that would resolve some of the issues for them.

The software will direct their learning. It will ask them certain questions and will then ensure that the project is carried out efficiently and effectively.

"I think that this is a milestone in medical education," Professor Parboosingh said. "This software is going to be the vehicle that provides the link between undergraduate and continuing education - it will empower the individual to take charge of their own continuing professional life.

"It is my belief that it will ultimately have such an impact that when you apply for a new job you'll not only provide your CV but your disk as well."

Professor John Parboosingh, from the Royal College of Physicians and Surgeons of Canada with collaborative partner, Ms Wendy Swinkels.



DIETING TEENAGERS RISK THEIR HEALTH

"I'd rather die of lung cancer than obesity." (A 15 year old girl, 160 tall, weighing 47kgs.)
"I try to keep thin because I think guys prefer it." (A 14 year old girl, 165cms tall, weighing 50kgs.)

In a study of 900 adolescent girls aged 14-16 years from 20 randomly selected Hunter schools, 57 percent admitted to using unhealthy dieting practices within the last month. These practices included skipping meals, fad dieting, dieting by cutting down on inappropriate food, crash dieting, fasting and using slimming tablets, diuretics, laxatives or cigarettes.

The study was part of Ms Margaret Grigg's Master of Medical Science degree and also revealed that 33 percent of these young women practised disordered eating behaviours such as bingeing, vomiting and dieting to lose weight when already underweight.

According to Ms Grigg, overseas studies have shown that at least two to five percent of teenage girls will be affected by the debilitating and potentially life threatening diseases of anorexia nervosa (AN) or bulimia nervosa (BN). While the majority of adolescents do not demonstrate these eating disorders, severe problem eating

behaviours are not uncommon, she said.

"High levels of dieting in young women who have normal body weight may not only predispose them to later eating disorders but can also result in a poor nutritional status, compromised growth, loss of lean muscle mass, lowered metabolic rate, fatigue, amenorrhoea (which may contribute to premature osteoporosis) and cardiovascular disease," she said.

Ms Grigg's study is the most rigorous assessment of these issues undertaken in Australia and, according to her superior Dr Jenny Bowman, the findings are of considerable significance. To complete the study Margaret used a reliable self-report questionnaire and collected anthropometric (measurement of size and proportion of the body) data on each adolescent female.

Peer and media pressure, and a perception that 'drastic dieting' strategies were harmless, were among the explanations given by the subjects for their behaviour.

"The findings suggest the need for

preventative programs targeting problem eating and dieting behaviours among adolescent women," Ms Grigg said.

Margaret Grigg and some of the dieting products used by teenage girls to lose weight.



ALTERNATIVES TO WESTERN SCIENCE

Distinguished Indian scholar, Professor Jit Uberoi from the Department of Sociology, Delhi School of Economics, was the special guest at a one day symposium organised recently by the Department of Sociology and Anthropology in conjunction with the Asian Studies Committee.

The title for the symposium was "Western Science and Its Alternatives", particularly apt since a major part of Professor Uberoi's recent work has been to uncover alternative traditions of scientific knowledge in the West. Through this he hopes to open out and extend Western science, overcoming the false dualisms of East and West, tradition and modernity, and enabling a genuine dialogue between Western and non-Western knowledge traditions.

Other speakers at the symposium included

Dr Hilary Carey, Mr Henry Chan, Dr Linda Connor, Ms Cath Laudine, Mr Jon Marshall, Associate Professor Raul Pertierra, Dr Ariel Salleh and Associate Professor Geoffrey Samuel.

"The Western scientific tradition (including social sciences) has come under increasing attack in recent years on a variety of grounds," said Associate Professor Samuel. "It is variously seen as inappropriately reductionist, masculinist and colonialist; as methodologically suspect; as ecologically destructive; and built around irrelevant and misleading dichotomies between mind and body, subjective and objective, consciousness and material universe."

"Consequently, interest has grown in other knowledge traditions both within the West and within non-Western societies.

At another level, this interest is a natural consequence of the diverse and pluralistic world society in which we all increasingly participate, a theme which has been addressed by much post-modern and post-structuralist writing."

The aim of the symposium was to go beyond simple dismissals of science and hostile confrontations between competing knowledge systems. The participants examined the possibilities of a constructive dialogue between different modes of knowledge. In order to achieve this, the emphasis was on discussion and interchange rather than on formal conference papers.

Transcripts of the presentations and discussions will soon be available as part of the Department's series of Working Papers.

BRINGING YOUR CHILDREN TO WORK

A young mother wanders in to the Kooinda Child Care Centre during her morning tea break, takes her excited child from the arms of a carer and settles down on a lounge in the sunshine to breastfeed. Later, a proud Dad walks through the door on an early lunch, gives his daughter a hug and then joins in a game with the other children.

"This is just how we want our centre to operate," said Tracey Ashton, Director of Kooinda Child Care Centre. "We try to provide an informal, family type atmosphere and our structure is open and flexible."

The University's work-based child care is up and running and providing a service unique in the Hunter. Unlike other long day care centres, Kooinda (which means 'happy place') has a majority of places for children aged three months to three years. The need for places for younger children was highlighted in a 1990 survey conducted by the University's Equal Employment Opportunity (EEO) Unit.

The concept of work-based child care was first mooted by the University Council in August, 1991 and a commitment was made

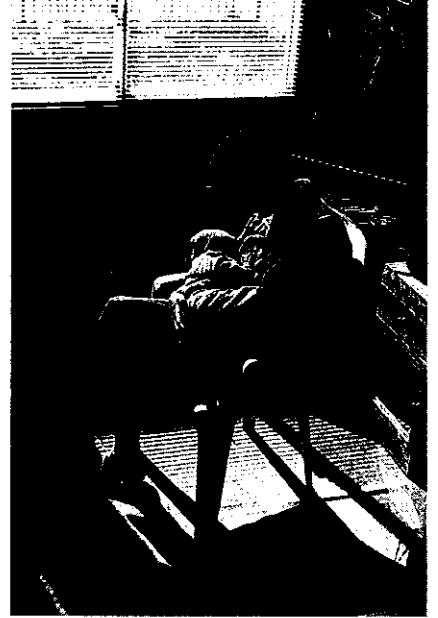
in February 1992 after consideration of an EEO Unit submission.

The University paid for the construction of the \$650,000 building and, because the government does not fund work-based child care, it will subsidise the centre to the tune of \$80,000 a year in ongoing funding.

According to the EEO Unit's Co-ordinator Ms Susan Jones, the University has made a significant commitment to work-based child care and many staff members will benefit. "In part, Council saw this as an EEO initiative which would really make a difference by allowing both male and female employees, who have responsibility for children, to keep working. We're delighted," she said.

Kooinda is managed by Kindergarten Union (KU) Children's Services, a non-profit organisation with 100 years of experience in child care. KU is involved in a variety of early childhood centres and recent initiatives have included work-based child care centres for Lend Lease, the Sydney Water Board, Fairfax and Pacific Power.

KU manages the centre's finances and



A mother breastfeeds her child during a break from work in the comfortable atmosphere at Kooinda.

offers resources for staff and parents, an adviser based in Newcastle, assistance with programming and staff in-service.

The centre has nine staff members including carers, clerical support and a cook. A nurse will be appointed soon. The extensive range of equipment is targeted at younger children, most of whom are not yet mobile, as well as activities for older children. A parent group has met on several occasions and will eventually devise a philosophy and policy for the centre. "We're getting to know each other first," said Ms Ashton.

BRIEFLY

The German Community Prize 1993 for outstanding achievements in Elementary German (GER110/120) was presented to Wendy Baylis and Genevieve Chivers in July at a special ceremony at the Germania Club. Dr Irene Gründer, the new Consul General of the Federal Republic of Germany and Mr Karl Schomburg, President of the German Saturday School made the presentations.

Adrien Riepsamen was recently presented with a \$500 cheque from the NSW Institution of Surveyors, his first year scholarship payment. Adrien entered the Bachelor of Surveying degree course with a TER of 98.25.

Congratulations to Peter Hempenstall from the History Department whose book *The Meddlesome Priest. A Life of Ernest Burgmann* was shortlisted by the National Book Council for its 1994 Banjo Awards (non-fiction category). Peter was in the

company of Paul Barry for *The Rise and Rise of Kerry Packer*, Suzanne Chick for *Searching for Charmain*, Robert Dessaix for *A Mother's Disgrace*, Michael Heyward for *The Ern Malley Affair* and Hazel Rowley for *Christina Stead*.

Mr Ian Raymond Bryant has been awarded the degree of Master of Engineering for his work on serviceability of masonry walls subjected to foundation movements. Ian is now working for CSR Hebel Australia in Melbourne.

The Assistant Dean of the Faculty of Law, Ms Anne Finlay, has been appointed to the Board of Governors of the Law Foundation of New South Wales. The three-year appointment was made recently by the New South Wales Attorney-General, the Hon John Hannaford MLC. Fellow governors include a member of the judiciary and representatives of the Bar Association, Law Society

and other legal and community representatives. Ms Finlay is also a member of a steering committee looking at gender bias and the law for the New South Wales Ministry for the Status and Advancement of Women.

Students from the Faculty of Economics and Commerce have won the Inter-Varsity Mock Arbitration Competition against competitors from other New South Wales universities. The University of Newcastle team, organised by the Students' Industrial Relations Society, won the final of the competition which was conducted before a bench of three commissioners in the Australian Industrial Relations Commission in Sydney. The Newcastle team defeated the University of Western Sydney in the final having defeated Sydney and Wollongong Universities in earlier rounds.

Achievement

SHADOWS OF LIFE

Old black eyes locked with young, brown ones. The light that had always burned so brightly in those black eyes was starting to flicker and fade. For the first time, Sonny realised how old Mynunai really was. As if sensing this realisation of the boy's, the old man's eyes flashed again and the fire stirred for a moment. It was only a moment, but it was enough to make Sonny lower his eyes in respect. Mynunai had seen the fire in the boy's soul, however, and knew Sonny's action was more out of love than obedience.

"Sonny, we've talked about this before. Your heritage is important. You must learn as much as you can. It's all up to you. Football is important to me too though, other things as well; and not all of it has to do with being Aboriginal."

"But you are. This is all we have." Mynunai swept an arm in a wide arc. "This is ours. Football's not."

He gave Sonny a final stern glance, then looked away. Sonny knew it was no good to push the old man when he was like this, but he wasn't finished yet.

"Why does this have to be all we have, Mynunai? There's more to life than this mission. We've separated ourselves from the rest of the town, do you want us to be separate from the rest of the world?"

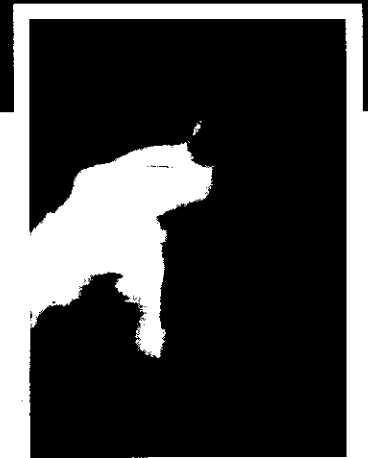
"They separated us; separated us from each other, from what was ours. They gave us these houses to shut us away from 'em. But they can't shut us away from the land." The old man abruptly stood up and began to walk away. Without looking back at Sonny he called, "You will be there tonight."

Sonny watched him until he disappeared behind one of the houses. He slumped down under the gums and rested his head on his knees.

An excerpt from a short story by Arts student, Brooke Collins, entitled *Understand Me*, the passage above illustrates one of the many experiences and points of view represented in a recently released anthology of



Cover design for Shadows of Life. The photo, entitled Hypnotic Rush II, is by Dora Papatotiriou, a postgraduate student in art/photography at the University.



fiction by young writers of the University of Newcastle and the Newcastle and Hunter Region. *Shadows of Life*, published with the assistance of the Newcastle Community Arts Centre and the University, and edited by Mark Crowley of the English Department, includes a diverse combination of poetry and short stories, the work of 15 young writers.

Assisted by Associate Professor Paul Kavanagh, Mark chose the stories included in the anthology for the individuality of their authors. "I was looking for strong voices in the work, for pieces that rang with a certain truth about the writer," Mark said. The stories have a strong multicultural influence, and include an attempt to relate the experiences of a Moslem bride, a South American tale about ghosts and demons (which provides the book's title, *Shadows of Life*), a haunting story set in the Irish bogs, and Brooke's story about the difficulties of a young Aboriginal boy coming to terms with the clash between traditional and modern cultures. "The multicultural aspect

of the work was a surprise for us," Mark said. "I think our society is becoming multicultural to the point where we don't even need to use the word any more. It seems that people are exploring, tending to reach out further and set their stories in other places, and even attempting to get a toe-hold in a culture that is not their own, to try and understand the experience of others in their fiction."

Shadows of Life was produced in association with the 1994 New South Wales Youth Arts and Skills Festival, which is funded by the NSW Ministry of Education and Youth Affairs and is a NSW Government Youth initiative. Contributors to the anthology are all under 25 years old and many of them are (or have been) students of the 220/320 Creative Writing classes run by the English Department.

WHICH WAY AND WHERE TO GO FOR A JOB

By Ms Helen Parker, Careers and Student Employment

The University's Careers and Student Employment Office provides a confidential and comprehensive service for students and graduates. At this time of the year, with students due to complete the formal requirements for courses, academic staff can play an important role by encouraging their students to concentrate their efforts on the graduate job search. The service is available at the Callaghan and Central Coast campuses. The Careers Advisers are Helen Parker, Sally Homer, Linda Sefton and Alanna Brown at Callaghan and Sally Purcell at the Central Coast campus.

The services provided range from the traditional one-on-one career discussion, to group activities directed at topics such as job search, application writing and interview techniques, as well as supplying reference material. Graduate and vacation job vacancies are available along with company brochures and application forms.

The Careers Library holds material about:

- job applications and interviews
- employer information
- postgraduate study
- professional associations
- opportunities for work and study overseas

Videotapes of employer presentations given at the University throughout the year are available for viewing, as well as tapes provided by major companies.

A personal computer for student use contains software such as JAC (job and careers explorer), SIGIPLUS (careers exploration) and JOBAPP (job application and letter writer). There are also word processing packages.

In today's competitive and sophisticated job market it is vital for job applicants to be thoroughly prepared.

Here are some comments from our clients.

STUDENT "I have used the Careers and Student Employment service on a number of occasions since beginning my post-graduate studies. The first time was in the second year of my degree, when I enquired about possible career opportunities and was given information about a number of options which I had not previously considered. Closer to completing my degree (would I ever finish?) I again approached the careers office to talk about my options. I hadn't applied for any jobs for a number of years and found the prospect of applying for new positions daunting. However, I got a lot of encouragement and support from the staff. The Careers Advisers made the prospect of a real interview seem easy and the other staff are always helpful. Apart from attending interviews in my place, I don't think there is much more the staff could do for me. They're probably sick of my face but I will probably be using them again in the future."

Lea Petrovic

Graduate Diploma in Management

PARENT "Just a little note to say thank you for having the time and patience to speak to my son. Our children need all the support we can possibly give them in these difficult times."

Mrs E Miller

PROSPECTIVE STUDENTS "My sincere thanks and appreciation for a stimulating and thought provoking (careers) workshop. Comments from the students attending were positive and I am sure that the information you conveyed to the students will be of great benefit in assisting them to make the correct choices in their selection of subjects for their post compulsory school years."

Director

Lake Macquarie South Cluster Department of Education

INTERNATIONAL EMPLOYER "Thank you for your assistance with the Ministry of National Development's recruitment of architects in its Public Works Department. On behalf of the Public Service Commission I wish to thank you and your (careers) department for your kind assistance."

First Secretary for High Commissioner

Singapore High Commission

ACADEMIC "One of the problems with being an academic is that insulation from the world beyond the University gate can grow with age. We develop a crust of knowledge which sometimes shields us from the fact that we have some role to play as primary producers. Our product is graduates. Certainly, those who "buy" our graduates are many and diverse, and remould them to their own individual and particular needs, but we need to have some awareness of the market and its forces. In our department, we turn to the careers office for assistance in advising students about career opportunities. The staff are friendly, helpful and competent. Each year we arrange a careers session in this Department for students completing their degree, and the careers office always send a person along to talk to students about life and opportunities after university. Meeting a Careers Officer also reassures them that the University is not only interested in training, but has an interest in their well-being beyond their degree studies."

Geoffrey A Lawrance

Head, Department of Chemistry

Careers and Student Employment's helpful advisers (Callaghan).
From (l to r) Helen Parker, Gina Sorensen, Alanna Brown, Leah Gray,
Linda Sefton, Sally Homer and Sally Purcell.



GRANTS WILL ENHANCE TEACHING STANDARDS

National Teaching Development Grants, part of the Federal Government's commitment to assisting universities improve their overall quality of performance, have been awarded to three projects within the University.



Dr Stephen Provost from the Department of Psychology has been awarded \$24,954 for developing software to support the collaborative use of Hypertext in learning; Mr John Burgess, Mrs Julie Lee and Mr Paul Kniest from the Department of Economics, \$51,744 for an integrated teaching and learning program for first year macroeconomics; and Mr Bruce Cook and Dr Paul McGrath from the Discipline of Human Physiology and Mr Robert Kucera from the Department of Community and Mental Health, \$35,432 for an interactive problem based computer program for teaching undergraduate cardiovascular physiology.

The grants were among 117 projects for which funds were announced by the Minister for Employment, Education and Training, Mr Simon Crean.

Dr Provost's project is designed to assist the production of software which will allow non-computer experts to use the collaborative development of hypertext as a teaching method. Hypertext which refers to non-linear text stored and managed on a computer, forces an author to consider the organisational framework of their knowledge in greater detail than might otherwise be necessary and would seem to be an ideal tool to assist the development of appropriate writing strategies in students.

It has the potential to assist students to develop high level intellectual skills as

well as allowing them to participate in an activity which effectively models the social processes by which knowledge is constructed and transmitted in the wider academic community.

The objective of the Economics Project is to develop a learning resource package for first year students which eliminates the need for large lectures, but more importantly encourages students to become actively involved in the learning process. The learning package will include a workbook and interactive computer software. In designing the package the research group wants to provide a resource to students which gives them the incentive to learn and understand economics with a lecturer who becomes a facilitator.

The Cardiovascular Project will produce a unique computerised problem based learning package which will be stored on CD-ROM disk. It will integrate a range of media in a novel approach to teaching this subject, which encourages improved motivation through a problem based approach to learning, and a high degree of interaction between the student and computer.

Above right: Mr Bob Kuczera (seated) with Mr Bruce Cook (l) and Dr Paul McGrath work on their computerised problem based learning package for cardiovascular studies.

Above: Dr Stephen Provost (far right) with psychology honours students using hypertext as a teaching method.

BEIJING MEETS NEWCASTLE

Professor John Fryer and other members of the Council of the International Society of Photogrammetry and Remote Sensing met with Dr Song Jiang, State Councillor for Science and Technology in Beijing, China this month.

The purpose of Professor Fryer's visit was to attend a meeting which considered China's application to hold a major international conference and technical display in the year 2000. The meeting was held in the government area immediately adjacent to Tiananmen Square and The Forbidden City and received extensive media coverage.

Professor Fryer was there in his capacity as the Technical Commission President of the International Society for Close Range Photogrammetry and Machine Vision.

FAR FROM FROTH AND BUBBLE

"The industry I chose was based on my own skills and expertise in the field of bubbles - I am proud to be a bubble man,"

Professor Graeme Jameson was speaking in light-hearted vein at the opening of Jetflote, the company which represents the commercial reality of 30 years of research and development. It has been set up to market what is now known as the Jameson Flotation Cell, a unique method of treating industrial wastewaters and effluents.

Professor Jameson's brainchild which promises significant benefits for industry by reducing the content of oil, grease and suspended solids from wastewaters before they are discharged into stormwater drains, sewers or natural watercourses, was praised for its innovation and practical applications by Senator Peter Cook who officially opened the company.

Senator Cook, Minister for Science, Industry and Technology, said one of the important needs of Australian industry was the development of patient capital for investment, or in other words, investors who recognise that some projects can offer significant returns for both themselves and the nation.

"The nation needs more people like Pro-

fessor Jameson who are prepared to go the long haul and wait for results on their investment," Senator Cook said.

"The way in which the Jameson Cell has been developed is a model of research and development for other companies and research organisations to emulate.

"It has all the elements we want to foster - imagination, foresight, patience, commitment, determination and the capacity to apply and commercialise research. It is an excellent example of translating basic

"The project shows the greater awareness of environmental considerations in industry."

research to applied situations and the needs of industry, and hence capturing greater benefits from the research.

"The project shows that it is misleading to suggest there is a clear dichotomy between pure and applied research," he said.

Senator Cook quoted Professor Jameson's own words from a recent article: "I firmly believe that each individual scientist should be doing both pure and applied work. It is the applied work which continually provides the challenges and insights to stimulate pure science."

Senator Cook went on to say that the Jameson Cell technology was an excellent example of world class innovative and practical science and technology.

"More importantly, the way it has emerged is an example and a role model for developing a culture of innovation in this country, so essential if we are to successfully take part in the global economy.

"I am impressed by Professor Jameson's determination to have the technology developed in Australia when it must, at times, have seemed much easier to simply let it go overseas. The project shows the greater awareness of environmental considerations in industry," he said.

Jetflote is an independent commercial spin-off from TUNRA Ltd., and specialises in the treatment of industrial wastewaters and effluents, using the principles of the Jameson Cell.

It provides contracted research, turnkey design, and the engineering and installation of treatment or concentration plants, using both proprietary systems and other advanced technologies designed to meet both cost and environmental criteria.

Jetflote occupies its own building on campus and has four direct employees who are also shareholders.

In the Jameson Cell, air is induced from the atmosphere and dispersed into micro-bubbles which are forced through a conditioned feed of ore and water. The mineral particles rapidly cling to the air bubbles in a pipe known as the downcomer.

Once released from the downcomer, the bubbles disengage and rise to the surface carrying the ore with them. The froth then overflows to a launder for collection, while the tails sink to the bottom.

Postscript. As Van Gogh's Ear went to press, it was announced that Professor Jameson had been elected a Foreign Member of the Royal Academy of Engineering, London. As far as we know, there are only three other Australians in the Royal Academy of Engineering. He is planning to travel to London in November to attend the dinner for New Fellows.

Professor Jameson with his high-tech bubbles.



THE ELDERLY IN PAIN

When clinical psychologist Dr Frank Hughes was working with dementing people at Allandale Nursing Home, he made the connection between disturbed behaviour and pain. This investigation was the beginning of an extensive study (carried out over eight years) of pain in the dependant elderly and culminated last month in the awarding of his PhD.

The findings will have an impact on treatment of pain in the elderly and may also be applied to other groups with multiple problems, particularly those with acquired immune deficiency syndrome (HIV/AIDS).

Now Head of Psychology at John Hunter Hospital, Dr Hughes began his study of pain in dementing elderly people by asking non-dementing elderly people about their pain.

"This threw up all sorts of confusing results," he said. "However, the research showed that it is impossible to stereotype the way in which old people cope with pain. Pain is a significant problem for elderly people but there is a great range in the ways in which these people cope with their pain.

"Some become victims - preoccupied with their pain and not able to do anything about it. Others seem to adopt very inwardly focused mechanisms. They accept it and

find ways of transcending the pain. They still report high levels of pain (five or six out of 10) but they say it's not a problem."

Dr Hughes said that the study also found that social beliefs about pain in old age cause people to under report their pain.

"It is something they expect and, as they get older, feel they must accept. They may also have met with indifference and therefore question the usefulness of saying anything at all. This belief makes it very difficult for nursing and medical staff to assess and manage their pain."

Dr Hughes also found that pain in the dependent elderly, besides being correlated with specific pathology, is correlated with indices of illness.

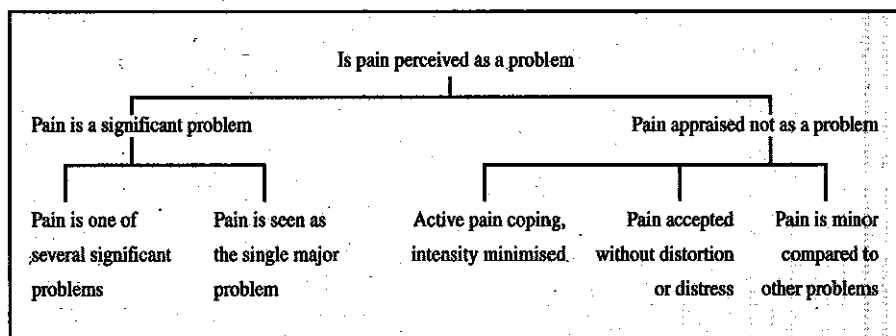
"The sicker the person, the more likely

he or she is to have pain that doesn't go away.

"Normally we get pain and then the body sends out its own internal pain killers to settle the pain down. That becomes more difficult with chronic pain because you're always getting the painful stimulus but the body is still able to establish equilibrium. However, as we become more ill, the ability to re-establish this equilibrium decreases.

"This has significance beyond elderly people because the other rapidly growing group with multiple pathologies are those with acquired immune deficiency syndrome (HIV/AIDS)."

Dr Hughes intends to continue the research he began eight years ago. His supervisor, Dr Ken Mitchell, has already retired.



Decision tree approach to assessment of pain appraisal and coping by the dependent elderly.



Pictured at the launch of two very different books at the University's Co-op Bookshop are (from left) Dr Jane Goodall from the Department of Drama, the Vice-Chancellor, Professor Raoul Mortley and Dr Chris Everingham. Dr Goodall's book, *Artaud and the Gnostic Drama* and Dr Everingham's book, *Motherhood and Modernity* were launched at the joint celebration.

"The University and the bookshop are behind our writers," said Professor Mortley. "Writing is a very lonely pursuit and sometimes these projects take years," he said.



Mr Max Lyle and the Dean of the Faculty, Professor Graham Gilchrist, at a double celebration for the Faculty of Art and Design.

The occasion was the official opening of both a sculpture exhibition entitled 'The First Eleven' comprising the work of eleven sculptors and the Faculty's new Art Gallery.

Participating sculptors in the exhibition which runs until November 24, are Jutta Feddersen, Graham Gilchrist, Glenn Henderson, Graham Lang, Vlase Nikoleski, John Turier, Trevor Weekes, Jill Peck, Peter Read, Peter Tilley and Paul Selwood.

The Editor

I feel very sorry for University staff who do not benefit from working in the Chancellery especially on a Friday morning from 9.00am when the bagpipes are being played on the adjoining Sportsfield No. 4. I have enjoyed this experience for the past three months and to-day (21/10) thought it proper to give credit to the group of pipers as they played on through inclement weather (true Scots) and only put down the pipes when a severe storm crossed the oval. Their weekly rendition is most pleasing. Thank you.

John Sanderson

The Editor

Further to Howard Bridgman's letter which appeared in your last issue, (*see this page, Ed.*) I have been approached by Grounds Staff from Physical Planning and Estates Branch who are concerned with what they consider to be a slight on their efforts, in addition to some inaccuracies which deserve clarification.

Although it may not be his intention, the inference drawn from the Associate Professor's letter is that current landscape staff are not dedicated to presenting the campus in its best possible light. Nothing could be further from the truth.

It is suggested that the ongoing litter problem on campus could be solved by employing students "for a few hours a month" to collect litter. As well, these students could also remove signs from trees and inappropriate areas at the same time. If only this were the case!

The fact is that, in addition to grounds staff constantly collecting litter, we currently employ students for 16 hours every week to help reduce the problem. As well, a great deal of PPE Property Services staff time is wasted in removing signs and posters which are erected at an astonishing rate by students, staff and outside commercial organisations. What is left at any time is merely the tip of the iceberg.

Associate Professor Bridgman refers to funding cuts, by which I assume he means the loss of the grounds Refurbishment Fund, which over the past several years provided up to \$200,000 per annum for specific works. These funds are indeed missed, but it should also be noted that the University has committed very significant funds to landscape works associated with all new capital works (all of which are executed in house by our own University personnel). Recurrent refurbishment funds have been com-

mitted to the rehabilitation and management of the University's catchment area.

That is not to suggest that we would not do a better job with greater resources. We have only nine landscape staff to cover an area of some 130ha. Part of our resource problem stems from the fact that the campus has been opened up significantly by developments since amalgamation (with a corresponding fast growth in student numbers), while grounds staff levels have remained static. Hence areas of bush which previously were isolated and not accessed by people (such as the Nature Reserve) now have busy pedestrian paths traversing them, with all the inherent litter and posters which come with large passing populations. Likewise areas around new buildings require a much higher level of maintenance than did the bushland which preceded their construction.

This Branch makes considerable effort towards addressing the problems described by Howard Bridgman at their source. This includes contacting the organisations erecting posters inappropriately to request their cooperation, as well as encouraging the Union to contain litter arising from food and beverage containers at their point of sale. Rather than criticising the small group of staff who take great pride in their work and the campus, it would be helpful if Associate Professor Bridgman were to question how it is that in an educated community there exist so many ignorant people who disperse this enormous pile of litter. Likewise the many organisations which advertise in a manner which creates visual pollution and litter problems should be politely reminded to lift their game.

Those people who care about the physical appearance of our campus (and I believe they are the majority) might consider whether it really is acceptable for others to continue to strew the University with paper, broken glass, cans and wrappers. Some events such as the Beach Party, Engineer's Fluids' days, Thursday nights at the Bar on the Hill and Autonomy day correspond with significant levels of littering and on occasions serious vandalism to University property. It is often argued that those perpetrating this vandalism are from outside the University community. Where ever they come from, this damage frequently corresponds to these social events and it seems reasonable to assume it is the event which has attracted the perpetrators of the damage.

Howard Bridgman has pointed out a serious

problem which confronts staff of Physical Planning and Estates every day, and which reflects significantly on the image presented of the University to the community and to prospective students. It would be of assistance, rather than blaming those who are largely the victims of this problem, if Associate Professor Bridgman joined us in addressing the underlying source of the problem to see what can be achieved.

Phillip Pollard

Senior Architect/Planner

The Editor,

Once upon a time there was a University set in a very pleasant bushland environment just west of the city of Newcastle in NSW. Through the efforts of a dedicated group of individuals on campus, the campus was kept clean and neat, providing a very pleasant place for employees and visitors alike. However, in the beginning of 1993, there was a change in attitude by the senior administration towards the campus. Under the threat of financial cutbacks from Canberra, several programs on campus were abolished. As well, a "business" approach to running the campus began.

One program abolished was campus appearance. As a result there is litter everywhere, for example: along the pathway and under the bridge between the Union and The Chancellery; in the bushes between carpark 2 and Geography; in the bushes under the Drama workshop building; on the ground and in the bushes around the Great Hall. The bush campus extension seems to have attracted litter, creating a messy, unsightly environment for everyone.

There is a simple and inexpensive way to minimise litter problems on campus. For a cost of around \$10 per hour per person, a group of students could be hired as a litter patrol for a few hours a month. Aside from picking up rubbish, they could remove posters and signs from trees and other inappropriate places. The benefit to the campus and its appearance would be major.

Businesses have to keep up appearances too. First impressions are very important. Trash, rubbish, bottles and other litter scattered around campus provide a very poor impression, suggests an administration that does not care, and can seriously interfere with "business" prospects.

Howard Bridgman,

Department of Geography

HEAD OVER HEELS FOR A CAMPESE GOOSESTEP

Forget the armchair appreciation of Australian sport, this was an evening to be remembered.

The occasion: the annual Blues Dinner, where sporting prowess was recognised and dedication to both sport and its administration was rewarded.

The newly welcomed Chancellor, Mr Ric Charlton, was in his element. When it was announced that he was a double blue, one of which was for Rugby, there were cries of delight from the guests.

Speaking with obvious enjoyment he referred to the dinner as the 'thinking person's sportsnight'. He then addressed what he called the top Uni sportspeople, administrators, "hasbeens" and scholars and posed the question, "Why is sport at a University so important in the modern world?"

"Even a reasonable game requires a will to win and extraordinary fitness." Mr Charlton said. "It is part of academic life and, like it, requires continuous innovation, investment and new methods of work flexibility. And like academic life and life in general it requires perseverance and discipline to not always play on the cosy level playing field.



Blue and colours - from left to right, Ken Alonso, Shane Ambrose, Brendan Berghout, Linda Hill, Andrew Walker and David Brown.

"Sport at any level is an effective way to develop qualities for success," he said. "That has always been the way, but it's now even more necessary,"

A Blue was awarded to Shane Ambrose for his outstanding performance in hockey while Colours were awarded to Ken Alonso for hang gliding; Brendan Berghout for mountaineering; David Brown for baseball; Linda Hill for women's hockey; and Andrew Walker for rugby.

Sportsperson of the Year was awarded to tumbling champion Elizabeth Heslop from an all-woman field, her victory hard-won from outstanding contenders such as Linda Hughes (soccer), Alicia Jenkins (disabled swimming), Keli Lane (waterpolo), Allison Lippey (hockey) and Narelle Parr (athletics).

A special honorary Life Membership was awarded to University groundskeeper, Herb Presker, for his long and dedicated service to the Sports Union.

Speaking on behalf of the sportspeople assembled, Andrew Walker thanked the President of the Sports Union, Professor John Fryer, for his dedication to sport and his vision.

Tapping into the atmosphere of the night Andrew said that while traditionally sport



Sportsperson of the year - Elizabeth Heslop pictured with President of the Sports Union, Professor John Fryer.

has acted as a great leveller in our society, it was the legends and heroes of sport that were admired by so many. "The Campese goosestep in full flight, the effortless swing of a Greg Norman drive, the power of Kieran Perkins and Hayley Lewis as they glide for gold or the delicate touch of Andrew Gaze as he floats a five-pointer into the basket are images that all can visualise," he said.

"It is not always so easy for the University sportsperson who is required to juggle their sporting activities with the rigour of academic life. A similar situation exists for the sports administrators. Many have tasks that make the Spanish Inquisition look like a P and C meeting.

"When you consider that many have had to face the Sports Union Board to defend their clubs, get around the groundstaff and Sports Union staff to allow access to facilities that are out-of-bounds and perform miracles with finances, I would suggest that you sign nothing and keep an eye on your jewellery!"

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