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Strength of character is an indefinable quality.
It usually emerges with time and familiarity.
In Justice Elizabeth Evatt it is evident and impactful immediately.
And impacts further over time.
Dignity, humour, quietude and warmth enveloping incisive analysis.

Farewell and thanks.
Sufferers of Chronic Fatigue Syndrome (CFS) have for many years been labelled as having a psychological disorder. Indeed, well-known British psychiatrists examining CFS patients during an early out-break of the disease diagnosed hysteria as the underlying cause. The problem has been put down to apathy, or even a desire not to work.

Four Newcastle researchers have now shown conclusively that the disorder is not a psychological one. The psychological symptoms and profiles result from, but do not cause, the disease. Chronic Fatigue Syndrome, they say, has a physiological basis.

The research team of Newcastle includes Dr Hugh Dunstan and Associate Professor Tim Roberts from the University's Department of Biological Sciences; Dr Neil McGregor, a private clinician in Newcastle; Dr Henry Butt, from the Hunter Area Pathology Unit of the John Hunter Hospital; and Professor Iven Kleinberg from the University of Sydney.

Together they have, for the first time, isolated a chemical marker in the urine of sufferers of Chronic Fatigue Syndrome, which they have labelled CFSUM1, "CF Someone".

Dr Dunstan explained that this marker can be directly correlated with all the key symptoms of CFS. These symptoms include generalised fatigue, muscle fatigue, muscle weakness, nausea, fever, dizziness and swollen lymph glands. The more prevalent the marker, the greater the symptoms.

The incidence of CFS or related fatigue disorders is widespread. Studies in the US (Bachwald et al) have shown that 27 percent of the population reporting to a doctor had a debilitating fatigue phenomenon affecting their daily lives. Furthermore, of 3066 people screened in the general community, 19 percent suffered from a debilitating fatigue phenomenon. Many people remain undiagnosed out of fear of being told they have a psychological disorder.

The difficulty associated with diagnosing the disease has resulted in confusion among patients and a huge cost to the health care system. Isolation and definition of the chemical marker and a simple urine analysis developed by the researchers will prevent incorrect diagnosis and save time and money. Dr Dunstan believes that further studies will also provide insight into the treatment of CFS.

The team in Newcastle has identified two groups of sufferers: a larger group which has the disorder to a lesser degree and does not necessarily seek treatment; and those who meet the accepted and very detailed criteria for the syndrome, including a high concentration and incidence of the chemical marker.

The presence of the chemical marker will enable researchers to define a new disease, which will no longer be known as Chronic Fatigue Syndrome. "When you talk about Chronic Fatigue Syndrome, you're talking about a disease which has an unknown origin," Dr Dunstan explained. "By identifying the marker compound and understanding why it exists, we will be able to define the disease in 70 to 80 percent of people currently diagnosed with CFS."

The next stage of the work involves identifying where the compound is coming from and what is causing it to arise. The Newcastle group is currently planning a large scale project with the Royal North Shore Hospital in Sydney to further test for and analyse the compound. The study will be highly detailed and involves a large number of people. But the necessary resources are scarce. "We now need a specialised machine designed for routine testing analysis," Dr Dunstan said.

"Obtaining the necessary equipment and further defining the compound will open up many doors for us as to the potential for treatment," Dr Dunstan said.
A return to a normal life after years of pain is a rare gift and one that Professor of Anatomy at the University, Professor Nikolai Bogduk has established as now being possible.

Chronic neck pain associated with whiplash injury can be sustained by motor vehicle accident, falling backwards, being hit in the head, being twisted in a scrum, falling out of a tree, or in many other ways.

Professor Bogduk has received a $1 million research grant from the Motor Accident Authority to investigate pain associated with whiplash injury. A previous grant from the Authority enabled the establishment of Cervical Spine Research Unit, located at the Mater Hospital, Waratah. The Unit is investigating the diagnosis and potential treatment of whiplash injuries.

A most serious aspect of this has been that accident victims have been genuinely experiencing severe pain, but have been unable to satisfy the medical advisers to insurers that the pain was due to an identifiable injury. This research has identified the cause of the pain.

"The fascination for me as a scientist is that once we have pinpointed the source of a patient's pain, we can explicitly treat the pain from that particular joint, or area, and tell which of these areas was causing the pain. Now we can," Professor Bogduk said.

"The most pleasing part is that patients are now sustaining their claims, and we are able to settle most cases without going to court. Many have been in the situation that they were in before, that is ongoing anxiety and that pain are gone.

"If we could forecast that they would not have pain and were not going to have pain, the expensive court cases could be avoided," he said.
B. The most commonly affected joints are the C2-3 and C5-6 joints.

c. X-Ray showing the three target points for a TON block (arrows).

C. Distribution of pain referred from each of the cervical zygapophysial joints.
COAL MICROSTRUCTURE

A complex grain of pulverised coal showing varied botanical components with a field width of 215 microns.

The same coal grain (mirror image due to the photographic process) with inertinite highlighted in red. Field width is 270 microns.

After two hundred years of using coal as our major source of energy, Australians are being forced to look more closely at the future potential of this precious resource and export commodity.

Competition among power stations, export market demands and environmental considerations is forcing the industry to examine coal more closely and determine how it can be used more effectively.

Our power plants are designed to be flexible with regard to coal quality, using a quite a range of typical Australian coals without the added expense of washing or blending to improve the quality. Overseas buyers generally design their power plants around a specific coal product, and so they do not have the luxury of this flexibility. Although our most modern power plants leave only 0.5-1.5 percent of coal unburnt, at a consumption rate of 6.5 million tons of coal with 20 percent ash content per year, 25,000 - 75,000 tons of unburnt coal is wasted annually from one power station.

In the brave new world of open competition power stations are looking to improve efficiency and eliminate waste.

Until recently this has involved only improving the technology of power stations, but Dr Judy Bailey from the University's Geology Department is attacking the problem from a different angle.

Dr Bailey is closely examining the flyash (waste material) from coal after it has been burnt to produce electricity. She collects the flyash produced at different stages of the combustion process, sets it in resin, examines it under the microscope and statistically analyses the unburnt carbon particles. Her results have been surprising.

Coal petrographers like Dr Bailey have long known coal to be a complex material, but knowledge of the characteristics imparted by coal's many components, or macerals, have not been used to full advantage in engineering applications.

Earlier work on coking in the Geology Department helped to reveal that the coal component called "inertinite" which was presumed not to react or burn, is not in fact, inert! Dr Bailey's work on combustion proceeded from this point.

"I was looking at the inertinite to see if it reacted in combustion, which it does, but I found something even more interesting," she explained.

"It is not the unburnt carbon particles originating from inertinite that are the major problem in power station waste. It appears that different bands of the coal grind differently. In a complex grain of coal, the interlocking botanical components act like reinforcement in concrete, making it very strong and difficult to grind. So it seems that big particles of coal from complex bands of coal seams cause most of the unburnt carbon."

One solution to this problem is reasonably simple, according to Dr Bailey. "In open cut mines at least, it is relatively easy to mine the different bands (lithotypes) of the coal seam separately. These different lithographs could also be stockpiled separately and then ground with different, appropriate energies to make sure no large particles are left after the coal is burned for electricity."

Apart from enabling the more efficient use of coal, this discovery will have environmental benefits. More efficient burning of the coal will reduce particulate emissions and flyash with low carbon content is suitable for recycling into bricks and concrete. This means less flyash will need to be retained in holding ponds which can sterilise large areas of land for other uses.

Dr Bailey's careful analysis of the combustion behaviour of various components in coal will also make it easier for Australia to market coal as an export. Countries which buy our coal have very specific requirements for each of their power generating plants. By knowing more about our coal and how to appropriately grind it for use in power generation, we will be better able to meet the market's needs.
Chichester Dam was never in danger of flooding the Hunter Valley after the 1989 earthquake. We know this because University researchers were photogrammetrically monitoring movements in the dam wall at the time and their results show the wall did not move significantly under the earthquake.

This monitoring work continues today and is an example of how TUNRA is using the University’s expertise to solve industrial problems. Before photogrammetric monitoring at Chichester Dam began, the then Hunter District Water Board used conventional surveying techniques to monitor movement in the wall.

Chichester was already an old dam when, in 1983, it was “revitalised” by feeding 93 tension cables through the core of the dam wall and into bed rock. At the time this was a novel procedure and regular monitoring was necessary to ensure the dam wall remained stable. The heightening of the wall by three metres and the increase in capacity to 20,300 megalitres with the fact that any dam wall and the valley which holds it in place moves by up to 70 millimeters meant the dam wall had to be watched closely.

To do this using conventional surveying methods required a huge amount of work. At every six-monthly interval, two observers would be there for a week monitoring the wall for movement at 200 points of the dam surface. A surveyor, 700 metres away, would manually operate a single camera to take photographs over a period of one and a half hours.

Photogrammetry is the technique used for conventional mapping: photographs that purpose are taken from the top of the Chichester Dam and they are taken from different angles and a flash activates the retroreflective tape. Most targets appear in each of the 12 photos.

"From the photos very precise measurements are taken of the positions of the targets," Professor Fryer explained. "These are fed into a computer program which derives the three dimensional coordinates of the points on the dam surface and then compared with earlier sets of data."

So far 16 different sets of data have been collected. Accuracy is within five millimetres which is only slightly worse than precise surveying techniques. Overall that the wall can move by up to 20mm and the photogrammetry can be done at half the cost and takes 100 times less number of targets. This is regarded as an industrial move by Fryer and the camera and the top of the hill as one would expect: a single hip."
In an era of global concern over threats to the ecology of marine habitats, the debate often seems to focus on the more attractive elements of biology - the larger, colourful or unusual species. The harder questions of the structure of underwater communities and the role that chemicals play there in destruction, control or preservation of environments have less emotional appeal, but in the long run may prove to be critical in their impact.

Marine chemical ecologist, Dr Ian van Altena from the Department of Chemistry hopes that his work will result in a better understanding of marine chemical ecology, provide economic benefits to industry groups and have significant environmental advantages. Working in collaboration with Dr Alan Butler from the University of Adelaide, Dr van Altena’s current work involves isolating and identifying a natural anti-fouling agent present in the sponge, Crella incrustans.

Fouling, or the covering of surfaces including ships’ hulls, oil platforms and waste water pipe outlets by organisms such as barnacles, is a major problem for industry groups, particularly the shipping industry. A surface roughened even by tiny microorganisms can add over 10 percent to a ship’s fuel costs. The development of anti-fouling tributyl tin paints and regular repainting every four or five years has minimised this problem - at a great cost to the environment. While these paints reduce the colonisation of surfaces by fouling organisms, they contain heavy metals which are non-specific and environmentally toxic.

Interesting parallels can be drawn between the use of tributyl tin paints and DDT. Both are very effective (although non-specific) and both were initially thought not to be significantly biologically active against non-target animals. The effects of DDT are now widely known. Less widely known are the effects of tributyl tin paints, such as the fact that they can cause sex changes in non-target gastropods or sea-snails. For this reason, and because of increasing concern about the effects on oyster aquaculture, many countries, including Australia, have restricted or even banned the use of tributyl tin anti-fouling paints.

Dr van Altena’s group has isolated and purified a single anti-fouling agent - a somewhat unusual, though readily identifiable phospholipid. An interesting aspect of its structure is that it incorporates a moderately long hydrophobic chain and an ammonium group, both features which appear regularly in experimental synthetic chemical based anti-fouling paints.

The group has shown that the compound has wider anti-fouling properties (it was originally tested only against the colonial ascidian, Clavelina moluccensis). “We are in the process of expanding our search to other compounds from the marine invertebrates that can be used to replace the toxic heavy metals used so widely in conventional anti-fouling paints,” Dr van Altena said.

“I want to firstly ascertain that these agents act as fouling deterrents in nature and then look at their application to industry,” Dr van Altena said.
The cane toad has become synonymous with Queensland. Introduced from Hawaii and Puerto Rico, *Bufo marinus* is a major environmental pest and represents a threat to both native and domestic species. Its rapid colonisation of the eastern and north western regions of Australia leaves little hope for eradication. But while the cane toad may currently be an economic and environmental liability, researchers are confident that the humble toad has significant export potential.

This export potential comes in the form of novel pharmaceutical products found in the skin of the cane toad. Toad skin preparations have been used for centuries by the Chinese and Japanese for many medicinal purposes including antibacterial, antipyretic, analgesic and in the treatment of oedema. Due to current venom shortages in China and the continuing relaxation of economic trade barriers, traditional Chinese medicinal associations are importing this animal product. The Australian cane toad is a viable source. A Queensland company is already exporting skin and venom of the cane toad through Austrade to markets in China for traditional medicinal purposes.

And that's where researchers at this University and the John Hunter Hospital (JHH) come in. Different batches of toad skin may show very different levels of activity. Supported by a grant from the Rural Industry Research and Development Corporation, the Newcastle team will develop an assay to determine the biological activity of different batches of toad skin. The team comprises Professor William Walters, Chair of the Discipline of Reproductive Medicine; Dr Mark Read, Department of Obstetrics and Gynaecology, JHH; Dr Ian Leitch and Professor Alan Boura from the Faculty of Medicine; and University B. Med. Sci student, Mr Teddy Lim.

Professor Boura explained that the toad skin contains a diversity of complex secondary metabolites. "These seem to have been developed through evolution, probably as a result of survival pressures, synthesised to act as toxins to potential predators," he said. "This rich supply of natural chemicals represents a unique resource which may lead to pharmaceutical benefits."

Toad skin extracts contain steroid derivatives responsible for some of the pharmacological activity of *Bufo marinus* venom. These steroidal compounds are known to inhibit the cellular enzyme sodium-potassium adenosine triphosphatase (Na+/K+ ATPase). This enzyme plays a major role in the regulation of cellular function, vascular tone and excitatory responses to various stimuli. Blockade of the enzyme results in enhanced delivery of calcium to the heart and vascular smooth muscle cells, increasing the strength of heart contraction and constriction of blood vessels.

"In some patients it is necessary to block the activity of this enzyme," Professor Boura explained. "When the heart muscle beat is weak, fluid retention occurs due to inadequate blood flow and reduced kidney function. The fluid accumulates in the lungs, causing breathlessness, and also in the ankles, causing swelling. By inhibiting the Na+/K+ ATPase the strength of the heart beat increases and the symptoms are reversed."

The major inhibitor of the enzyme currently used by doctors is digoxin. Toad skin extracts may provide a viable alternative to digoxin and thereby enhance their export potential.

The team of researchers recently discovered that a digoxin-like substance was released from the human placenta. This has raised the possibility that an inappropriate increase in the release may be involved in some disease states, particularly high blood pressure during pregnancy and reduced growth of the baby in the womb. The researchers will endeavour to identify the substance or substances in the placenta and their role, if any, in disease.
all things are an exchange for fire
It comes from the furnaces
you should've seen it Sunday
spewin steel over the sides
they give it too much oxy-
comes to the caster by car
240 tonne thereafter
the ladle's lifted by that crane
onto the turret the glow
under the lid like the sunset-
magic roundabout, musicbox
heavy metal, spin, swing, dead
set over the tun-froth yeast wine-
dish tundish triple the slide gate
opened and the metal pours
out of the glowing red refractory
into the puls-
earth metal breathing
-singing sparks flame the two holed nozz-
le pouring the metal like ice
cream into the quick flux
mould alumina steel copper force water
oscillating peristaltic the thin frozen shell
out still lava inside over the head
of the man at the spray chamber
through the first roller then down more
cataracts and steam gushing
water white red clear metal
in the dark blue running with water
rolling strand through vertical curving
under out to cutters natural gas oxy hissing
white hot through a space a finger thick
to divide this bloom from strand
-see the liquid core still in then-then cooler
hoist crane table rollers cut off the burr
over the bridge where in the night
they glow like coals waiting.

Paul Kavanagh
PERPETUAL REFUGEES

Romanies ("Gypsies" sic) are the ultimate displaced persons, perpetual refugees. Since their departure from India in the tenth century AD, they have been harassed and persecuted as an unwelcome minority in every country they have been in. (Ken Lee, Anti-Romani Racism: Ancient and Modern, paper presented at “Confronting Racism” Conference, December, 1993, Sydney)

Ken Lee’s words come from the heart. The University of Newcastle lecturer is a Romani; a Gypsy. Born in a horse-drawn caravan in Ireland, he was eight years old before he lived in a house. “My family had been nomadic for centuries and my father was the very first Romani of our lineage who actually ever settled into a house,” he explained. “Even after we’d moved in, we’d still often hitch up the caravan in summer and take to the road.”

Ken’s passion for his heritage has lead to him offering one of the first courses of study in Romani history and culture available at an Australian university. “My aim is to firstly inform,” he said. “Most people know very little about the Romani people and what understanding there is tends to be very stereotypical - the gaily painted caravan, the violinist in an Hungarian restaurant, flamenco dancers or the crystal-ball gazer or palmist. While these certainly are all elements in Romani culture, there’s a lot more to it.”

Like the Romani genocide in Europe in World War II, for example. Despite the fact that the “Holocaust” has been regularly portrayed as “belonging” to the Jews, documents have shown that they were not the only people selected for racial hatred and extermination. Romanies were also selected on racial grounds and there is documentation to show that they were being persecuted and sent to concentration camps long before any attempt to perpetrate similar actions against the Jews. The reasons for this persecution during World War II are complex, but Ken sees
the fact that they were an easy target as being part of the problem. "Romani has been victim of persecution for centuries in Germany, it is true, throughout Europe. The first anti-Gypsy legislation occurred in Germany (in the Holy Roman Empire) as early as 1417, only a few years after the Romani had arrived there," Kerl outlined. "It just went on from there for 500 years or more.

The census does seek to explain the complex reasons behind this long-term persecution, noting in Germany but throughout Europe, "I guess the most logical, if simple, explanation was that they were foreign; they were different. They looked different with their black skin, hair and eyes (they were the only Indians who ever traveled in Europe), they dressed differently and indulged in "strange" practices. For many they were the antithesis of everything that was supposed to be good, clean and Christian.

Despite being victimized for centuries, the Romani, the word means, "the land of the people," are now found in almost every country in the world. It is estimated that one million Romani are living in the United States today. "Here in Arizona, we have about 15,000. But again, we can only guess. If they are mobile, they tend not to be counted in censuses and even if they are voluntary, they will often resist the invasion of their identity. Our current estimate is a 120 million worldwide.

The timing of the new song is especially appropriate. The Romani have written and sung out from Romani authors as we begin to try and put together the beginnings of our literacy culture," said Kerl. "Up until now, we have been primarily an oral culture, so that any record of our movements and actions have been written from the "other side," as it were. As more work is done in this area and as more people study programs such as ours, we will help to set the record straight."

"Children and young people have always comprised the most significant element of a circus audience and today the circus continues to hold a strong fascination for them. The circus has enriched and fed childhood fantasy - and fantasy has always contained elements of the mythological struggle for the mastery by humans over wild beasts and the natural environment. The childhood fantasy for the circus has survived despite the introduction of television and other forms of modern mass entertainment."

In his latest book, *Children of the Circus: The Australian Experience*, Associate Professor of History John Ramsland and collaborator and circus historian Mark St Leon, look at the great Australian circuses - Ashtons, Silvers, Perry Brothers, Wirths, Lennons, St Leons - and bring us into the lives of circus children. For while children have been, and still are, the circus's greatest fans, they have also been its life blood.

"The circus has operated continuously in Australia since the 1840's and has generally been organised on a family basis. Here, as elsewhere, the successful mature performer was almost invariably the result of arduous regular training begun during early childhood," Professor Ramsland said.

"Performers had to be trained from the earliest possible age to replace older members who gradually retired from the rigours of performance. In this way family dynasties were perpetuated and skills were handed on from generation to generation."

Professor Ramsland said he wrote the book because it married his interest in the history of children and the notion of small scale culture operating within a larger context. "I wrote a book called *Children of the Back Lanes* which dealt with destitute and neglected children in 19th century colonial NSW, and while circus children weren't necessarily neglected, they are certainly a special category of children," he said.

While it may have seemed to an Australian youngster at the turn of the century that the circus was all glamour and excitement, the reality was quite different. It was a hard life. It meant dealing with distance, isolation and climate, and the training was relentless.

"Children were attractive to circus proprietors as they were an inexpensive form of labour that could be moulded, trained and utilised and even exploited in a wide variety of ways," Professor Ramsland said.

"They became part of the circus world by one of two paths. Either they were born into a circus family or they were adopted or apprenticed by a circus from the outside. This latter path represented an extraordinary traffic in the lives and fortunes of innocent young people."

From the mid nineteenth century onwards, Aboriginal children were taken into the circus from their tribal camps, while others were "adopted" if they looked promising. There were no formal procedures, the parents literally gave them away in the hope that they could make a life for themselves. Some were taken without their parents' permission. Often they had been the victims of neglect or they'd been born out of wedlock.

Such adoptions were not confined to Aboriginal children. Perhaps the most famous "adopted" child was May Wirth. At the height of her career she was a true "circus queen."

"She was one of a small sturdy band of Australian circus performers who achieved lasting fame on the world scene," Professor Ramsland explained. "She retired from active circus life in 1937 at the age of 43 but even today there are those who believe that her skill on a horse has not, nor will be equalled."

May was born into a circus family. Her violent father was a gymnast who began to teach her the basics of tumbling and contortion at the age of
three. Eventually, unable to put up with her husband's violence any longer, May's mother separated and subsequently offered her daughter to the powerful Wirth circus family. May was only eight years old.

"As the youngest child in the family, May was holding her mother's mobility back," Professor Ramsland explained. No official papers were signed; she was simply given to a couple in Wirth's and that was that.

But despite her misery at being separated from her mother and brothers and sisters, May prospered. At the age of 18 she was the star attraction at Barnum and Bailey's.

The turning point for circus children was the Child Welfare Act of 1923. From then on children had to receive proper education and for most that meant lessons via the Sydney based Correspondence School which reported their progress to Child Welfare.

"It provided a good standard of education for the children wherever they went. But their culture generally resists higher theoretical education and encourages practical skills. That's another way they lock the children into the life. The more educated the children are, the more opportunity they might have outside," Professor Ramsland said.

The famous Ashton family has been in the circus business for nearly 160 years and the patriarch of the family, Doug Ashton, says proudly that in three generations no child has ever left the circus.

"The family claims there is no coercion, but there is," Professor Ramsland said. "In every way possible they socialise the child in the direction of performance. And although Doug Ashton is right in the sense that all his children and grandchildren are still in the circus, they are not all still involved with traditional, hierarchical circus. Some have broken away and taken up with the avant garde such as Circus Oz.

Professor Ramsland believes that the circus is experiencing a bit of a revival at the moment. "That's the historical pattern - decline and growth - both in individual family circuses and in the circus generally."

Doug Ashton, as quoted in the book, puts the matter quite simply. "The future of the circus the world over is ensured, for while ever there are children there will always be a circus."
ALCOHOL AND THE UNBORN CHILD

Following 10 years of research into the effects of alcohol on the developing foetus, a University researcher has warned that pregnant (and breast feeding) women should avoid alcohol at all costs.

Alcohol will go wherever water will go and reaches the foetus and embryo via the maternal circulation. The growing foetus can thus be exposed to the same levels of alcohol as the maternal system.

Dr Ray Murdoch from the Department of Biological Sciences says that while the direct effects of alcohol on the foetus (growth and mental retardation) have been known for some time, the indirect effects have been given little attention. He believes that a combination of the direct and indirect actions of alcohol on the foetus will have profound effects.

One of the most noticeable indirect effects is that alcohol in the maternal system impairs uterine biochemistry. Glucose homeostasis (carbohydrate metabolism) is profoundly disturbed. Blood glucose levels are increased and this induces an insulin response in the mother. Dr Murdoch explained that any impairment of the maternal system will affect the developing foetus as the mother will no longer be able to provide it with adequate nourishment.

While the growth of the foetus is largely dependent on the well-being of the mother, the Newcastle group has found that the embryo has certain mechanisms in place to protect it from the adverse effects of alcohol. These mechanisms will be the subject of further investigation. Meanwhile, the group is analysing data to obtain a more complete understanding of the direct and indirect effects of alcohol on the developing foetus. These effects will be studied under binge and chronic conditions. The development of a powerful staining technique has enabled the Newcastle group, with the assistance of Iranian PhD student, Asad Amini, to distinguish even the most minute skeletal abnormalities.

“The technique we have developed, with the help of Asad, allows us to clearly see developing cartilage and bone at the same time (the cartilage stains blue, the bone red). The technique specifically picks up skeletal abnormalities and cartilaginous defects,” Dr Murdoch explained. Using this technique, Dr Murdoch’s group has defined a very clear threshold for alcohol “tolerance” in mice. Biochemical changes occur in almost 100 percent of cases where alcohol is given in quantities above the threshold. It is not known if such a threshold level exists in humans, and if it does, whether the threshold differs between individuals. In view of this, Dr Murdoch’s advice remains firm: “Avoid all alcohol throughout the course of pregnancy and during lactation.”
Almost 11 million copies of teenage magazines aimed at adolescent girls are sold in Australia each year and it has been estimated that just about every female beyond early childhood in Australia sees one of these magazines weekly. So what exactly are teenage girls consuming and is it harmful or helpful in their education as women?

According to research carried out by sociologist, Dr Kerry Carrington and her assistant Anna Bennett, these so-called teen magazines are not the blight that many scholars have labelled them. "These magazines have not had a good reputation among feminist scholars," Dr Carrington said. "They have been described as products of a patriarchal society, as manuals by which girls mould themselves for the gaze of men, where they are duped by the ideology of romance into a future of domesticity."

However, by carefully and systematically studying 48 recent editions of the four most popular magazines, Dolly, Girlfriend, Cleo and Cosmopolitan, the researchers found what they had suspected: there is a much more complex story behind the popularity of these magazines.

"I was suspicious of the idea that roughly two million girls in Australia each year could be duped in this way. If they are assumed to be passive and victims, where is the pleasure for them? Our research shows they are nowhere near as passive in their cultural practices as we had thought," explained Dr Carrington, who has explored girls' culture in much of her research.

"We found that girls are not the dupes of romantic individualism and consumerism. The magazines we looked at are full of good quality advice on issues such as health, relationships, homosexuality, incest and safe sex."

While admitting that teen magazines aimed at girls are full of advertising for fashion and beauty products, Dr Carrington believes the argument that girls fall prey to the incitement to purchase these products misses a number of crucial points.

"Not all advertisements involve selling beauty products and fashion accessories. In all four magazines we looked at, advertising covered a diverse range of products such as condoms, tampons, erotic devices, music, literature, and public health announcements such as safe sex messages," she said.

"Many of the magazines use make-ups and make-overs which provide girls with knowledge to experiment with their sexual identity. In the July edition of Girlfriend, for example, Melissa is made-up in three different ways - glamour, sporty and natural. Of course they all promote a range of beauty products, but the crucial point is that they also expose femininity as an artifice, as something made-up."

Another criticism of these magazines, according to Dr Carrington, is the promotion of heterosexual values. However, she said, many of the magazines address gay and lesbian issues in their advice columns, often giving the telephone number of counselling services.

"In every issue of every magazine there is good quality advice mixed with the play, presented in a form girls can digest," she argued. "They fill a void. Where else can girls get this type of information? Sex education in schools does not go into details like how to insert a tampon."

"The magazines also give girls power as consumers. According to the editors, whom we interviewed, the magazines are captives of their consumers."

The real problem, according to Dr Carrington, is revealed in a comparison with boys' magazines. All boys' magazines are based on hobbies and, on the whole, portray girls as passive, sex objects - draped over cars or lying on the beach. "There are never photos of girls surfing in boys' surfing magazines and many celebrate violence and aggression. There is no positive recipe for boys, except in the fact that a growing number of boys are reading Dolly and Girlfriend."
TIBETAN HEALING WITH LOCAL APPLICATIONS

Associate Professor Geoffrey Samuel has long been interested in Tibetan culture and religion. Now a research grant will allow him and other researchers in the Department of Sociology and Anthropology to investigate the diverse choice of healers available within a refugee Tibetan community in the south of India.

In 1991 Professor Samuel visited Kollegal in Karnataka State in search of a shaman epic singer for research into aspects of Tibetan epics. While visiting the refugee settlement he observed the various healing outlets available to members of the community. They included a Western-style hospital staffed by Tibetans, a traditional Tibetan medical clinic, the monastery where deities and other spirits were harnessed for healing purposes and a spirit medium, who also called on the spirits to heal the sick.

"I wondered how they all fitted together. Did one refer patients to another? And I wondered how members of the community exercised their choice of healer," Professor Samuel said.

Other collaborators in the project include medical anthropologist Dr Linda Connor, Dr Elizabeth Stutchbury, now at the Australian National University, Dr Santi Rozario another Newcastle anthropologist and several postgraduate students. An ARC grant will allow PhD student, Ms Kylie Monro to travel to Kollegal to study how and why people in these pluralistic healing situations use the range of healing resources available to them.

This research may well have applications in Australia which is, itself, heading towards a more pluralistic health system. According to Professor Samuel, it is common for Australians to use biomedical resources alongside acupuncture, homeopathy and other alternative medicines. "How and why does the patient choose which resource to use? Our study will be one the first anthropological studies to focus on the patient's role in deciding where to go and what to do about healing."

Kylie will live in the community for 12 to 18 months and participate in the day to day activities of the community members, paying particular attention to illness narratives and what they reveal about how people understand different healing choices. She will also record how illness episodes are actually managed.

The Tibetan case is a particularly interesting one, according to Professor Samuel, because of the way in which the culture combines a strong scholastic and academic tradition with shamanism and spirit mediums.

"Although Tibetans are stereotyped as an isolated population, Tibet's position on major trading routes between India, China and the West has meant that historically they have been very open to outside knowledge," he said. "However, they have tended to incorporate or adapt new ideas rather than simply adopt them wholesale. And because they have had a prolonged refugee experience, they have had to adapt to an environment, climate and health problems very different from those which prevail in Tibet itself."

"They are a very self confident culture and still believe strongly that they know something we don't."
bath for jackie bellyflop from the weedplank running laughter bounce and spiral through two elements the danger sign red and black corroded wood teenboys bounce fishermen in the next blue the blue beyond blue the pavilion painted sand steamgrease on glass the fry area torn paper striped cardboard cups sugar and salt sisters on starting blocks concrete icebergs the igloo carved out no entry door aquamarine burn bloodstained feet imprint tidal roll the moon patron old jack whitewashes the water let out on monday hire a bald rubber tyre

painting by Sarah King

poem by Adam King
Images, reminiscent of pioneering days, full flavoursome and steeped in the history of the University, richly adorned with the brushwork of Illustrators, Peter Marsack, Penny Johansen, Genevieve Wallace and Andrew Atkins and complimented by the superb photography of Gary Weber.

**BUSHLAND CAMPUS**

is a book which brings into focus the talents and abilities of the Designer.

The book contains lists of various species of plants, birds and animals. It utilises striking end papers featuring the beautiful colours of the spotted gum tree (the most common eucalypt on campus) shown when fresh and wet in early summer and has an eye-catching dust jacket (designed by Roger Dunstan) featuring that ubiquitous and cheeky Australian bird, the Noisy Miner, which is often seen dangling upside down on a grevillea or bottlebrush. The production of this book has provided a window with which to view the extraordinary talents of the designer.

I myself have learned a great deal about how a quality book is actually produced once the material (text and illustrations) have been provided. Issues of layout and design, the production of a dummy for quotations, debossing and embossing, choice of paper stock, colour separations (and inspection for their trueness to the originals) and so on - I was a completely neophyte in this world. I will carry many memories for a long time, including that of Roger Dunstan and Andrew Atkins using the actual feet of a very dead noisy miner to make the debossed authentic footprints of the dust jacket of the book.

The work on a languishing text undertaken by Glenn and Jillian Albrecht, the total commitment, hard work and devotion to a final quality product by Roger Dunstan and Allan Morse, our design and production duo, without whom we would not have had a book. And finally all of those fine people who gave generously of their time and talent, the University and the general public are the richer for their efforts.

Kevin McDonald
Convenor, The Friends of The University Book Committee

"The designers expertise and knowledge being brought to bear, bringing a loosely connected regime of desires and ideas into reality..." work which began in late September 1993 with delivery in April 1994.