THAT RESEARCH IS EDIBLE

CHRISTMAS EDITION
CONTENTS

COVER:
The cover cartoon and all cartoons in this issue are by Newcastle Herald cartoonist, Peter Lewis.

LIVING THE LIFE OF ENQUIRY
by Professor Raoul Mortley, Vice-Chancellor, University of Newcastle

The idea of research was probably first crystallised in the Western scholarly tradition with the Greek word “historia”, meaning “enquiry”. This term came to assume the range of meanings associated with our word “history” much later than the classical period of Greek thought in which it surfaced, but it initially denoted all forms of enquiry, and particularly that which focused on mores, societies, and cultures.

Since then it has been a constant theme that the civilised society will, as part of its activities, pursue knowledge. Both discovery and invention, which are two different things, form part of this research tradition. Universities house most of the research which is done in our society, but the impulse towards both discovery and invention is a broadly based human phenomenon, and it is in the nature of human beings to pursue knowledge. It is the job of the university, at least in part, to take up this human activity and develop it to its most sophisticated level possible.

We do not assert, particularly nowadays, that this is the only activity of the university. Indeed there can be a problem, if in universities students are treated as being the vehicle which provides the money through which research can be done: there is a question of public accountability here, and I have always stressed the need for this University to be student-oriented first and foremost, whilst at the same time fostering a vigorously intellectual and scholarly image of what the University should be.

We can do both these jobs, just as we can attend to our need to service the community in a variety of ways. That is the hallmark of the university as we now understand it: diversity of function, and versatility, characterise the modern university. These days we are called upon to be not just one thing: not just an intellectual, not just a teacher, not just a community contributor, not just an administrator or academic entrepreneur, but there is a little bit of all of this in the make-up of the ideal member of staff, as the current context would have it.

We have a strong research University. It should be maintained and developed in the same direction. We should all have as part of our make-up, and indeed try to cultivate, that very pure delight in discovery and innovation. There is an exciting element in this, and there is something here which is capable of exciting the general community around us as well. The life of enquiry is a delight to live!
"THAT KNOWLEDGE IS EDIBLE...A PROPOSITION ON THE NATURE AND PURPOSE OF RESEARCH"

Position
In The Drunken Goldfish - A Celebration of Irrelevant Research, Hartvig shares with us some studies in the field of science.

In 1969, Rybach, after years of study, was able to conclude that a mildly inebriated goldfish will remember what you teach it, unless it continues drinking until it is paralytic. Timms, in 1976, discovered that one-eyed goldfish swim as fast as two-eyed goldfish. But blind goldfish are slower.

In 1975, the Atmospheric Science Research Centre was able to conclude that chicken picking is of doubtful value as an index of tornado wind velocity.

And after years of flatworm training, cutting up and cannibalism, McConnell in 1956 was able to assert that not only did a trained worm that was cut in half and allowed to regenerate now give two trained worms, but if you minced a trained worm and fed it to its peers the recipients appeared to know quite a bit of the stuff learned by the now-deceased creature.

The only possible conclusion is of course that knowledge is edible!

Taking such studies out of context for a cheap laugh can get you lynched in a serious forum. They do, however, open up the notion that the essence of research, that creative intellectual drive that lies hidden beneath the quantifiable economic and social benefits, is very difficult to define.

This abstract characteristic makes it difficult to formulate policy and judge research and performance quality in objective analysis that is not driven by contemporary or cultural values.

The final edition of "Van Gogh's Ear" for 1994 attempts to present some elements of the debate.

CHRISTMAS TIME IN THE RESEARCH BRANCH
by Professor Ron MacDonald, Pro Vice-Chancellor (Research and Information Technology) University of Newcastle

Each year, about November, the University waits anxiously for the outcomes of the very intense work which has gone into the preparation of submissions for competitive funding. The ARC, NH&MRC and other schemes will have finally organised their Ministers into signing letters of offer. For a lucky few, Christmas comes in November - for others the outlook is bleak as they scurry to organise resources to tick over for the next year and try again.

There is an attitude of “Santa's Workshop” in the Research Branch. A lot of activity has gone into the preparation of this year's effort. There is a brief few hours to feel good about the successes recorded and then the analysis of the not-so-successful begins. Next year's application kits are sought and seminars to prepare applicants for changes in policy, new rules and shifted goalposts begin.

We stress the importance of external grants a great deal in the University, sometimes to the irritation of those academics who feel that they do not need the support of external funding. They are able to subsist on internal allocations with students supported by scholarships whose funding they do not have to provide. The mechanics of calculation of the Composite Index should make it clear, however, that even the small quantum of funds these lucky researchers need is very dependent on the success of the University in external funding.

For 1995 the University's position in the Composite Index translates into $5.6million in the Research Quantum. While the University's Operating Grant is about $120million, the Relative Funding Model provides about $55-60million of that for the support of the faculties. Since the $5.6million in the Research Quantum goes entirely to the faculties, it represents a very substantial part of the disposable income available to faculties for work in 1995.

Spare a thought then for those researchers who will work hard over the next two months to produce an impressive array of applications, even though perhaps one in four or one in five will be successful. Spare a thought for the staff of the Research Branch who will spend the next two months nagging members of staff to get their applications in on time, so we can spend some time ensuring the quality is high.

This is the meaning of Christmas to the Research Branch. However, as we introduce this issue of Van Gogh's Ear (or "Vegie" as I believe it is called), I am sure the articles will restore the frivolity of Christmas and readers will enjoy a few moments of respite from the pressures of everyday university life, to smile at the whimsical humour of some of my erudite colleagues.

Pro Vice-Chancellor (Research and Information Technology), Professor Ron MacDonald
Like it or not (and almost none of them likes it), scientists and researchers are dependent upon politicians. It is the politicians who decide ultimately how much money there is for research and indeed what areas are open to research.

Decisions made by politicians about the size of the national or state budget, the total levels of public expenditure and the proportion of that money dedicated to research may suddenly be banned or research using foetal tissue, or animals — the stuff of politics. This is because "proper" allocation of scarce resources is almost always determined the "bottom line" for politicians - namely whether they get re-elected or not.

Similarly, politicians make decisions about what are the priority or the "hot-go" areas of politics. Suddenly, breast cancer research or research in communications technology are elevated to the top of the national agenda. On the other hand, research using foetal tissue, or animals in research may suddenly be banned or restricted - either because of the moral sensitivities of particular politicians or in response to electoral pressure (sometimes specifically orchestrated).

Once scientists understand this, they will be better placed to do something about it. This assumes that, for the foreseeable future, most research in Australia will be publicly funded - a safe assumption given all the evidence.

It then becomes a test of the intellectual and political skills of scientists to show that they can manipulate the political agenda and orchestrate political forces with the same skills as the RSL, the greebies, the mining industry, the trade unions, AIDS activists or ethnic communities. It is a never ending source of surprise that so much brain power translates into so little political power.

It is relatively easy to extract money from governments for research which clearly and unambiguously advances some politically determined national strategy or yields major financial benefits.

This, however, appears to be bad news for the most important of research - pure curiosity research. The research that will lead to another penicillin or PEP test needs a political culture in which to grow - a culture which values research for its own sake.

This is not impossible to achieve, but it does require that scientists themselves dirty their hands by involvement in the process of public debate and policy making.

Politics, believe it or not, are only human. They are as capable of understanding the benefits to be derived from funding basic research as anyone; they are capable of being inspired by the processes and the discipline of science; they are capable of appreciating the long-term benefits which do flow to any society which has a lively, expanding and active scientific community within it.

However if the scientific community is going to do better than it has in the past, if it is capable of learning from the example of others (eg. the arts community), it has to put its house in better order.
I have an ecosystem.

Three hundred year old river red gums surround the idyllic billabong, an ancient anabranch of the Goulburn river. Stony, overgrazed hillsides sprout new hope as the fine roots of seedling eucalypts probe the crevices for a hold. Sulphur-crested cockatoos, the larrikin inhabitants of a hundred-thousand years, wheel, tumble and screech their raucous courtship.

They soar and swoop and in great white clouds, three hundred strong, alight on the vineyard to rip and tear the young vines to shreds. Not mischievous pecking this - this is carnage.

Can harmony be restored? Can man and beast coexist to satisfy the lusts of the one and the needs of the other? What research topic could be more worthy!

Electric perches, evil you may feel, seemed to offer deliverance through avoidance conditioning, when the pamphlet arrived from the USA. "Wonderful results have been reported from 98 percent of vineyards, in which bird damage is a problem of the past". The cockies got a buzz indeed and told their friends. The valley resounded to the orgiastic sound of a thousand cockies climaxing together and returning for more.

Gas guns and the threat of a writ from a disturbed neighbour, plastic hawks hovering menacingly above the vines, singing wires, plastic bags flapping, bunting - all ignored or even enjoyed by the marauders. " Shoot them," said a local. "There might be a law against despatching sulphur crested cockatoos but it don't say nothin' about native leghorns". But I couldn't, the shotgun always tilted away from the flock - no, not in my ecosystem!

The cockies don't land when there are people about, but it's a weekender and the budget doesn't extend to a permanent employee. What about geese? They're aggressive, large and territorial and the prospect of a goose-stepping gaggle marching imperiously up the rows might just be the trick. So four goslings have been acquired, cowering, nervous chaps and the new problem is the fox. Can't coop them up or they won't patrol, let them loose alone and they're history. And so, the family's long-suffering, urban terrier has been left behind to shepherd the gaggle.

A sweet, friendly chap whose only task hitherto has been to bring to the back door each morning the Melbourne Age and claim a toast crust. Suddenly, faced with custodianship of the vineyard, Bertie has taken massive responsibility upon his slender shoulders.

And, after a week, we returned on Friday night to an intact vineyard, cockatoos roosting high in the three hundred year-old red gums and the four day-old corpse of a goose by the farmhouse back door. In rigor mortis its cylindrical neck is exactly the size and shape of the rolled-up Monday edition of the Melbourne Age.

Knowledge is edible!

Alert Grafitti readers may recall an item about the potential for a government research grant to assess the efficacy of juggling as a method of rehabilitation for young offenders (October 13-19). We are now able to report that a two-day conference in Chicago for the American Association of Therapeutic Humour has canvassed this very territory. More than 20 speakers covered subjects such as "Humour with HIV Patients", "Humour in Geriatric Sessions" and "Therapeutic Juggling and Other Prescription Toys". Dr Bill Pry, a pioneering humour researcher at Stanford Medical School is now studying the change in humour in Spain in the two decades since the death of dictator Francisco Franco.

Should you feel the need to submit an extra copy of your application for some reason, try using carbon paper. While not the most modern of products it will evoke in the administrative heart a flutter of excitement as it brings back memories of the glory days of administration in which most of them began their careers. This can only advantage your case.
"What is 'feedback' and what has it got to do with research?"

The basic idea of feedback is simple enough: one determines where one wants to be (the set-point); measures where one is (the measurement); and finally one takes corrective action (the feedback) to move towards the set-point.

This simple idea is pervasive in human endeavours. For example, one need only think of how one drives a car. The idea is also of great importance in industry. The set point is typically a measure of product quality and the feedback action is applied to variables such as raw material flow rates, or input energy.

Interest in feedback can be traced back at least to the Hellenistic period. For example, Ktesibios who lived in Alexandria around 250BC used feedback to regulate the speed of water clocks.

A more recent feedback device is the fly-ball governor used in James Watt's steam engine in the 1800's.

The aim of this mechanism was to regulate the speed of the engine: if the engine sped-up, then the fly-balls would be thrown further outwards, this action would close off the flow of steam to the engine and hence reduce the speed to its original value. This mechanism was essential to the engines that drove new industries and hence we see that feedback was central to the industrial revolution.

More up-to-date examples can be found in most modern systems. For example, a large aircraft will typically have 20,000 feedback loops. Feedback is also used extensively in modern automobiles. For example, it is used in car engines to optimise power output whilst minimising unwanted exhaust gas emissions. Indeed, this example is of considerable contemporary importance because recent legislation in the United States mandates exact requirements on pollution and emission, which can only be achieved by accurate feedback control. It is thus not surprising that our research group in Newcastle has a particular interest in this problem.

Unfortunately, it is not always easy to apply just the right amount of feedback to achieve the desired result. For example, over-zealous correction can lead one to over-shoot the desired set-point. When this occurs, we may be forced to take even larger corrective action in the reverse direction. If this continues, then oscillations will be produced which build up over time. This phenomena is usually called instability. However, even if instability is avoided, it is often a difficult task to calculate just how much feedback is needed to achieve a desired result. For example, we can all think of examples in child psychology or economic systems which amply illustrate this point.

Over the past few years, I have been involved in research aimed at achieving a better understanding of feedback. My particular interest has focused on multivariable systems (ie. where several variables interact in complex ways) or on systems that are nonlinear (such as when there is a limit placed on the allowable feedback action). Research into these topics requires an understanding of the mathematics of dynamic systems as well as an appreciation of implementation issues associated with computer hardware and software.

The design of feedback systems is usually based on mathematical models. These are used to predict the behaviour of the system and to calculate the required feedback action. Naturally an important issue is the impact that model accuracy has on one's ability to calculate appropriate actions. This is usually studied under the heading of robust design.

One of the most technically demanding problems in feedback design is experienced by systems that exhibit negative response. These systems initially head in the wrong direction but ultimately recover. The control of these systems requires great faith in the model to weather the short term losses in expectation of long term gains. This kind of control system is not uncommon, especially in the areas of human affairs and economics.

It might be argued that negative response and feedback are actually key elements in all university research. It takes unusual courage to initiate and support programs that generate short-term results. Yet real research always involves high risks and thus long term planning and visionary support will always be needed to carry research through periods of loss. This is perhaps the raison d'être for university research in the first place.

On the other hand, feedback from colleagues, peers and potential users plays an equally crucial role in keeping the set-point of international level research firmly in view, and avoids the drift phenomena that typically occurs when no feedback is present.

In summary, feedback was a cornerstone of the industrial revolution, but also remains a key factor in modern industry. The concept may, indeed, have something to say about the very process of research itself.
University executives model the latest in briefcase wear.

THE DOG OF RESEARCH

by Mr Ross Woodrow, Fine Art, University of Newcastle

The successful business entrepreneurs of the 80's were invariably flamboyant attention seekers who used extravagant gestures to create high profiles that attracted capital in direct proportion to the amount of publicity they generated.

Today's business executives and merchant bankers seem, by contrast, to be invisible. No longer do we hear of the impulse purchase of a $50 million painting or a television network, and more's the pity. Business has become too staid and conservative and nowhere is this more obvious than in the homogenised and anonymous design of the briefcases being emailed into board rooms around Australia.

An this could change with the introduction of the FIDO, a revolutionary briefcase design, developed here at the University of Newcastle. The FIDO (financial & industrial dog organiser) will guarantee its owner maximum impact when carried into any executive level meeting or promotion interview. It may even help female executives break through the glass ceiling.

The final form of the FIDO is the end result of long and extensive research and field trials. I developed other briefcase designs which attracted much more attention but proved impractical in some situations.

An early design of a bag in the shape of a bomb proved a real attention grabber during a field trial on the train to Sydney. No one sat next to me, but there were lots of comments, although these weren't as good natured as I expected. Things really got unpleasant at Sydney airport. The BOMB bag was eventually abandoned, although it had enormous internal capacity.

When it was decided to work on a shape with more universal appeal, the dog seemed a natural choice. Even so, a survey was conducted to see if dogs were more popular than cats, with the dog getting the nod. Intensive research and development followed: including an arduous trip to the Gold Coast to discuss dog anatomy with the renowned veterinary surgeon, Dr Ben Woodruff. Apart from, naturally, a study of the entire history of the dog, the shape of all the different breeds had to be tested for suitability. The legs of the Wolfhound were far too long for a briefcase and the shape of the Dachshund would not allow a quarto size book in its stomach, for example. Thankfully, much of this work was carried out on computer.

As is often the case with research, it might seem that all this effort led nowhere. But, during an inexplicable late-night moment of insight, I just drew a generic dog shape on paper. In fact, it is obvious that the final shape is not a simplistic product of my imagination but a synthetic condensation of all the different dog breeds I had studied. A dog that would be all breeds to all people.

A prototype of the bag was put into daily use by Sydney bank manager, Mr Max Woodcock. He declared the FIDO an absolute winner, which allowed him to express the zany streak in his character and show the tellers, or girls as he calls them, what a good spurt he was. His field report also praised the practical aspects of the bag, especially the space in the head for the lunch box he brings every day, since he usually has a working lunch in his office with one of the 'girls'.

However, comments by his staff did lead to modification of the model trialled by Max, which was an anatomically correct male dog. It was decided that all future versions should be non-specific in gender, although they will vary in colour.

Obviously, the FIDO won't be suitable for everyone. Public service whistle blowers, for example, will hardly want to draw attention to themselves with a big FIDO on the photocopier. Yet, for institutions needing a high public profile, the FIDO will be a saviour and there seems no reason why the FIDO should not be made a compulsory part of the University's corporate uniform.

Handy hints

5 Should your research application be unsuccessful, it would not be unappreciated if you were to take a couple of the key members of the review panel to a really good lunch. This is common practice and it gives them an ideal opportunity to put a face to your next application.
THE MAGIC CAVE

by Professor Barry Boettcher, Biological Sciences, University of Newcastle

“No! I won’t go to Santa.”

“Come on Henry. I don’t understand what has come over you. You’ve gone to Santa every other year to tell him what research grant you have wanted. Why won’t you go to Santa this year? Be a good boy, and sit on his knee, and give him details of the research grant that you would like to receive. Besides, if Santa brings you a nice research grant, Daddy and I won’t have to provide you with one. And, you know that times have changed, and Daddy and I don’t get the same amount of money we used to. We really don’t have very much money for research grants. Now, won’t you be a good boy?”

“No!”

“Why not?”

“He didn’t give me a research grant last year. I had been good and had done my research. I had become the authority on rare Australian lizards, and had described seven new ones, including one with the shortest known food chain in the world. And I had received the Gecko Gong from the International Herpetology Convocation.”

“Yes, Daddy and I were a bit surprised that Santa didn’t give you a research grant last year. But, I’m sure it will be different this year.”

“But a chance! Since Santa decided that he would have to fall into line with the European Santas, and then he got Black Pete as his assistant, what hope have we single children got? Last year, when Santa changed his ways and Black Pete came to Toy Town with his book, single children like me simply got ruled out of any chance of getting a research grant.”

“I don’t understand, Henry. What do you mean?”

“Last year when I sat on Santa’s knee, Black Pete opened his book and read out that I had published four papers in the previous year. Santa pointed out that large families publish more than four papers in a year. He pointed out that some of them had even published 68 papers. He told me what we all know, that times are tough, and there isn’t as much money to give out these days. So, he now gives out the research grants to big families, since they need more money than an only child and they publish more papers than an only child.”

“But Dear, you’ve published four papers again. And, if you hadn’t known that disgusting Queensland tropical lizard harvested those little leaves, and then chewed them up and spat them out on the walls of its hole to stop the growth of fungus, we probably wouldn’t have been able to cure that terrible hospital infection. I’m so proud of you! I know there is real worth in your research. I’m sure Santa will bring you a nice research grant. Please go and sit on his knee. Please!”

“OK. But if I don’t get a research grant this year, I’m not going to visit Santa ever again.”

“Ho! Ho! Ho! And what a fine fellow you are. Black Pete, what does the book say about young Henry? Ho! Ho! Ho!”

“Well, Santa, he has published four papers during the year. Also, you will remember, he is the one who found the leaf extract that killed off the hospital fungal infection. That finding attracted much attention. To think that a local scientist was able to find the cure when the problem had been given to some of Australia’s leading research institutes, and there had even been a search overseas for someone who could help. This really is a good record for the year, Santa.”

“Ho! Ho! Ho! Very good. And what has this young man asked for this year, Black Pete?”
"He's asked for a research grant to continue with his lizard studies. And he's asked for a research grant to purify the anti-fungal agent in the leaf extracts, so it can be identified and possibly synthesised for commercial production."

"Well, Henry, we really are happy with your record for the year. You should be very proud of what you have done. But, as you know, times are tough. Santa doesn't have as much money these days as he would like to have. I haven't enough money to give research grants to all of the good children. Ho! Ho! Ho! So, unfortunately, I have to make a choice.

"Your lizard study is very fine work and you have an international reputation. But I don't have enough research grants to go around, and if I give a grant to a big family, there will be more of them to make use of it.

"Now, about the anti-fungal agent. The best way to develop this project will be for me to give a large research grant to a large family, so they can continue the work you have started. I have one very large family in mind. They have direct computer, telephone, fax and satellite television contact with other large families overseas. So, you see, that family will be able to continue being very happy, and keep themselves occupied during the next year."

"But I've been good this year. I have published good research results. The anti-fungal agent is my finding. If I had some of these toys, I would be able to have some of the fun that people in large families do."

"Ho! Ho! Ho! Well, Henry, as I have explained, when I give toys to large families, there are more children to play with them. Maybe you could use some of the toys better than some who have been given them in the past. But, if you really do want to play with some of the big toys, and have use of a research grant, you will just have to find some way of becoming part of a large family. Have you ever thought of leaving your Mother and Father, and becoming part of a big family?"

"I knew it was a waste of time and money to come here!"

"Well, Dear, what did Santa say?"

"As I told you. It was a waste of time coming here, I'm not going to get a research grant for Christmas, and it is a waste of time hanging up my stocking in the future. Once again, the big families are going to get all of the presents. I'll have to continue to use my own pocket money if I want to play at research. Of course, I could get myself adopted into a big family - which wouldn't be a bad idea. I would enjoy playing with some big toys occasionally."

"But, Dear, your father and I need you. Our family wouldn't be the same without you. No-one else could take your place here. I'm sure that you can continue with your studies on those little creatures, and write some more of those wonderful little stories for the journals. I am sure that, next year, Santa will find a research grant for you."

"Have you ever thought of adopting an orphan refugee?"

"Don't be like that, Dear, remember - it is better to give than to receive."

*Black Pete is part of a European Christmas tradition. He reports to Santa on how children have behaved during the year.*
Much has been written about changes in the directions of research in higher education in Australia - in terms of policies relating to concentration and selectivity, quality, and the internationalisation of knowledge. The newer roles of research managers have been discussed in various forms. What has not been considered extensively has been the role of research administrators. Such administrators are the key to the system. They underpin accountabilities and achievements towards quality research management. Staff in offices of research or faculty offices, for example, have had new and important roles to play, in addition to those of academics.

The role of the research administrator needs to be viewed in the context of a broad set of issues and challenges in research management. The context for effort by individual administrators includes:

- calls for increased accountability (and decreased autonomy);
- scrutiny by the committee for Quality Assurance in Higher Education (and the public outcomes, including being assigned into bands and the allocation of funds);
- fierce competition for research funding;
- recalculation of the research quantum;
- infrastructure shortfalls ($125 million according to the Boston Consulting Group);
- increased pressure to secure funds from non-government recurrent sources;
- pressure to make research "relevant" and economically useful;
- strengthening links with industry;
- selectivity and concentration;
- internationalising Australia's research effort;
- the relationship between research, teaching and community service;
- postgraduate research;
- developing intelligent information systems (ideally these systems are set up to enhance our own reporting and decision-making).

So, what role can administrators play in this context in relation to quality research management?

A very significant role, I suggest. And by the term "administrator" I am not referring here simply to the PVC(R) or a Faculty Dean or the Head of the Office for Research; research management is not their exclusive province. Research management requires teamwork and partnerships between academic staff, between academic and administrative staff, between the university and external parties.

Internally a surprising number of administrative areas have a bearing on the university's research effort, including: the office of the PVC(R) or DVC(R); the office for research (or equivalent); faculty offices; school or department offices; finance or budget central areas; planning and statistics; computing services and the library; human resources; staff development; publications and printing; and a number of areas involved in obtaining community support and involvement in university research, such as university commercial companies or commercial services departments, public affairs and development/fundraising offices. No doubt there are other administrative areas providing services which impact upon research.

Success depends on:

- recognising all the various elements within the university and externally which have a bearing on a university's research performance;
- understanding the environmental factors which are impinging upon universities generally, and specifically their research effort;
- appreciating what all parties contribute to support the university's research effort;
- understanding why universities are "in the research game";
- total commitment and focus;
- understanding their own university's research management strategy, and their role within that;
- mutual respect and understanding between academic staff and general staff.

Research management, therefore, can be seen to have taken on new dimensions for academic and general staff. Quality and success depend on a partnership of shared expertise and cooperation in an increasingly competitive environment.

**Handy Hints for New Researchers**

6 Now that the Australian economy is booming it is advisable for all researchers to concentrate their efforts on the pure and the esoteric. Tying yourself to projects which might benefit industry or business and thereby help to stimulate the economy will inevitably be unsuccessful.

7 Don't feel constrained by general University procedures for advertising, purchasing or payments. It's only red tape and a verbal arrangement with a supplier, preferably over the phone, will get things moving much faster.
NURSING AND THE ACADEME: ADVANCE OR RETREAT?

by Professor Irena Madjar, Nursing, University of Newcastle (excerpts from Convocation Inaugural Lecture)

What on earth are nurses, good women and men though they may be, doing in the university, the academe - the garden of Aristotle, where learning and scholarship, pursuit of knowledge for its own sake, and search for truth are paramount?

Is this where we rightly belong? Do professors of nursing have anything to profess? Does nursing have anything to offer to other university disciplines as it joins the community of older and wiser scholars? Is being in a university an advance for a profession finally coming into its own, or a retreat from the problems and realities of practice into the ivory towers of esoteric theories, endless navel-gazing, and inconsequential research? Is the establishment of Faculties of Nursing a willing recognition that students of nursing should and can be educated, by having their minds cultivated, their visions enlarged, their critical powers made acute, and their consciousness awakened to great themes and important questions (Herbst, 1991)? Or is it merely a pragmatic acceptance of a political decision which, for the time being, is not worth resisting? I am raising these questions not because I think that I can adequately answer them, but because I believe that they need to be asked.

These are not easy times in which to establish a new university discipline, even though internationally nursing has proved itself as a worthy and important member of the academic community. If I may use a sporting metaphor, being located in a university is not the end goal but the beginning of an important race. What nursing is facing is a marathon with many a hill and a few hurdles on the way.

For the time being, we find ourselves in a situation where we have less time to prepare our students to obtain a university degree and registration as a comprehensive nurse than was available in the past to prepare students for a certificate or a diploma in one specialised area, such as mental health nursing.

Clinical experience during which students can interact with actual patients and work alongside experienced registered nurses is an essential component of preparation for registration and yet nursing departments are seriously under-resourced to provide optimum learning experiences for their students.

As individuals we are fully aware of the need to be doing research, but the sense of a nursing research culture (let alone tradition) is only beginning to emerge in this country. The situation is further complicated by the fact that lack of availability of research degrees in nursing in the past has led to staff undertaking studies and doing research within other disciplines. I am not questioning the value or the quality of such research but I suggest that, even when carried out by a nurse and involving nurses or students of nursing as participants, it is not necessarily nursing research, any more than a woman doing research on women is necessarily undertaking feminist research. We will not make a significant contribution to the development of our own discipline, nor to the development of a local culture of nursing research, while our energies are dissipated in too many different directions.

Advance? Retreat? Only time will tell, but for now I believe that having nursing in the university is definitely a step in the right direction. Despite the hurdles and the difficulties in Australia and other countries where the move has occurred only recently, the wider international picture should give us cause for real optimism.

The range and quality of nursing research and scholarship internationally is something in which we can take pride and inspiration. The range relates not only to the scope of the problems addressed through nursing research but also to the selection of different research methods which nurses have used. While other disciplines tend to be associated with a particular method of research (eg. sociology and survey methods, physiology and laboratory experiments, medicine and randomised clinical trials), the nature of nursing has required that nurses utilise a range of different approaches in order to address adequately and appropriately the questions arising out of nursing practice.

Whatever happens to nursing education in Australia, international literature from nursing and other sources will continue to influence our perceptions of nursing and the way we practise it. We need to be much more critical in our evaluations of what others are proposing as the prescriptions for nursing than we have been in the past.

We must not only be critical readers of what others are writing; we must also contribute to the debate.

Professor Irena Madjar

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8 Should you be successful in getting a research grant, remember that your budget is a rough guide only. It is expected that costs will over-run, indeed to stay strictly within a budget can make you look unimaginative and dull.
SUBLIME CREATION OR THE MEANDERINGS OF A LUNATIC?

by Associate Professor Robert Constable, Music, University of Newcastle

The Nobel prizes were announced this month in Stockholm, but what of the Ig Nobel prizes, awarded each year by the Massachusetts Institute of Technology? The tongue in cheek awards are given to researchers whose achievements "cannot or should not be reproduced". The Chronicle of Higher Education reports that this year's physics prize was given to the Japanese Meteorological Agency "for its seven year study of whether earthquakes are caused by catfish wriggling their tails". The mathematics prize went to the southern Baptist Church of Alabama for its "county-by-county estimate of how many Alabama citizens will go to hell if they don't repent." The entomology award was given to veterinarian Robert Lopez for "his serious experiments in obtaining ear mites from cats, inserting them into his own ear, and carefully observing and analysing the results".

The prizes were announced by three Nobel laureates - Dudley Herschbach (chemistry 1986), William Lipscomb (chemistry 1976) and Richard Roberts (physiology 1993) - in front of a 1200 strong audience. Surprisingly, some winners were on hand to accept in person. Sadly, no Australians made the list.

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The Archduke’s Sonata for Piano and Violin in G Major, 1812 as it appears in “Musical Autographs from Monteverdi to Hindemith” by Emanuel Winternitz, published by Dover Publications, New York.

Though the reader might find it difficult to accept, this manuscript is Beethoven’s fair copy of the third movement of his Trio for piano, violin and cello in B flat Opus 97, known as “The Archduke”. It was dedicated to Beethoven’s friend and patron the Archduke Rudolph, hence the nickname. The manuscript is obviously an editor’s nightmare. Such work would not be accepted from any undergraduate music student anywhere in the world. However, given sufficient training and patience, musical sense begins to emerge from the mess.

A clever palaeographer with a wicked sense of humour can have a lot of fun with this type of manuscript. The writer once encountered a similar manuscript, obviously by Beethoven, in a learned journal. It was described as a fragment of late Beethoven not previously known to exist and containing the outlines of a hitherto unknown song by the great composer. The catch was that the author had hidden away among the crotchetts and quavers written in what might pass for Beethoven’s handwriting, the message “ring Schiller”!

The task of sorting out a manuscript like “The Archduke” is often a process of eliminating the improbable. Some of the most difficult sections are those where he obviously changed his mind, crossed out what he had written and jotted down the correct notation over the top of it. There are many examples of this in the scherzo from Opus 97. Sometimes he extends the staff lines by merely drawing them in his own rough hand. This probably indicates that he came back after he completed the composition and added a bar here and there. Usually he does this to improve the proportions (architectural design) of the music. More problems arise every time he dips his quill in the ink well.

If the reader studies the manuscript for a while, a few superficial features stand out:

He was in a hurry when he wrote it.
The slope of the note stems and bar lines seem to indicate that he was right-handed.

Each bar appears to have the equivalent of three crochet beats.

He was inclined to write messages to himself as he went along such as his insertion of the number 1200 in two places. There are a few things that this could mean such as some sort of proportional or structural calculation for the movement. It could equally have been a reminder of what his fee would be for this piece.

He was obviously able to buy manuscript paper containing 16 systems per page.

For those who are interested in this manuscript, a comparison with the published version could be a revealing experience. Alternatively one could listen to a recording of this masterpiece with renewed admiration, not only for the composer, but for the editor too. The Conservatorium Library has both full score and a number of recordings of this popular work.
IF I KNEW WHAT I WAS DOING IT WOULDN'T BE RESEARCH

Dr Soozy Smith, Chief Executive Officer, TUNRA

I arrived in the Aviation Building on November 14 to begin a new phase in my career. No, unfortunately I'm not going to be taking flying lessons - well not in the near future. I've come instead to join TUNRA (The University of Newcastle Research Associates).

There on my desk, among the hundred other things of course, is an invitation to contribute to the Christmas edition of Van Gogh's Ear - specifically on the subject "That research is edible!"

Ah research, yes, my mind begins to wander back to my halcyon days of research, which incidentally are more distant than I care to admit. Mind you, I can still remember the elation at a good result; ie, one that supported your working hypothesis, and the tears of frustration when it did not.

There was the time in chemistry when Alexus spent six weeks crystallising/purifying her "product" only to discover on analysis that her prize crystal was an anti-bumping granule. Then there was Phil with his pharmacokinetic studies on Ginger, the pony. The thought process being that anything given orally must come out the other end. I'm not sure what I found more amusing, Phil shovelling poo into the hired mini cement mixer or Ginger chomping on his shoulder. With this, I would have to agree that research is indeed edible.

But I digress......research for me had no boundaries and no rules. It, more often than not, began with an answer which I intended to find the question to and ended up with the answer long forgotten and a series of questions needing answers. There was the thrill and excitement in the race to publish before your peers but absolute misery when pipped at the post. There were the long unsociable hours only made bearable by the frequent visit of true friends, dressed in full dinner suits no less, bearing a silver platter of chilli-concarne and chocolate Hob Nobs, my staple diet at that time.

The telephone rings and I'm brought back to the present day. "Good morning TUNRA, can I help you? You are interested in undertaking some consultancy work outside the University - but your not certain how TUNRA operates and what we can do to help you. Why not come over and pay us a visit, we would be only too happy to chat to you. Wednesday at 10am? See you then." With this I am reminded that my days of hands on research are behind me, but boy do I miss those chocolate Hob Nobs...."
The anthropologist Levi-Strauss argued that food as a cultural symbol had to be 'good to think'. That the social aspect of eating takes precedence over the alimentary has been explored by Mary Douglas: carving the Christmas chook (or turkey), we reproduce constancies of meaning about ourselves and our social relations.

It is not surprising that anthropologists have focused on food: ethnographic research is fundamentally a long term immersion in the everyday life of people who are initially strangers. Nothing can make one feel so 'Other' as a plate of something regarded as 'not food' in your own culture (like English tourists appalled by the Greek practice of running up a hill, collecting weeds and calling them herbs). Refusal to eat, however, is a hostile act which is often read as anxiety that the host intends to poison the guest.

Levi-Strauss belongs to an earlier generation of anthropologists whose forays into the exotic world of non-western peoples was untouched by Edward Said's conceptualisation of Orientalism; we can no longer be innocent to the power effects of the scientific discourse of anthropology in constituting the Other. Clifford Geertz once cynically remarked of Levi-Strauss that he abandoned his journey among Indians in South America because he found 'physical proximity and intellectual distance' intolerable, so he returned to France and a more comfortable 'intellectual proximity and physical distance'.

Said catches anthropology up in his devastating characterisation of western scholarship concerned with the Orient; that the 'Orient' is a product of an imagined geography, a negative reverse image of ourselves. However, his critique has never engaged with the practice of actual anthropologists (as has been done, for example by Trinh Minh-ha). At the 1988 meeting of the American Anthropological Association, Edward Said met his 'interlocutors', a group of anthropologists who challenged his wholesale negative characterisation of anthropological practice: for a whole generation of anthropologists, political opposition to the presumption and practice of American foreign policy, manifested in the horror of the war in Vietnam, led them to anthropology and a desire to understand the Other, or more precisely our relation to the Other.

The folkloric rendering of difference which so often characterises multiculturalism can be criticised for objectifying, stereotyping, and denying the Other a voice, but it also incorporates a celebration of curiosity in diversity and human creativity. Tourism (and anthropology) can be negatively characterised as a means of appropriation and incorporation of the Other, but should we foreclose on the possibilities of engaging with and celebrating difference?

Which brings me back to food. Are we what we eat? Indonesians very carefully regulate social interactions through the consumption of food and drink - the visitor and host exchange information on the progress of the encounter by the pace of consumption.

In the province of South Sulawesi in Indonesia, where I have lived and worked, the Muslim peoples avoid pork as part of their religious observance, but non-Islamic people have taken up the fact of eating pork as a symbol of their specific identity and assiduously pursue this, but always in a way not to give offence to Islamic guests (eg. making sure the pork is always cooked in disposable or dedicated vessels). Consuming these treats, one signals a shared sociality which is all the same predicated on difference, not sameness.

There is no doubt that Orientalist critiques have shifted the frame within which the discursive practice of anthropology occurs: we can no longer 'consume' the Other either to be titillated by the exotic, or in order to understand ourselves (as in the work of Margaret Mead).

However, orientalist critiques need not signal the end of anthropology. Like all disciplines, it is a product of its historical formation and is constantly remaking itself, most recently in response to post-colonial and feminist critiques. We ourselves are 'in the frame' in the understanding of the social relations of the 'global system' and concomitant contemporary cultural practice.

There is a celebratory side of anthropology, which enjoys difference as the expression of human creativity and recognises its enriching possibilities, but, post-Said, political and intellectual naivété cannot be hidden behind notions of scholarly 'objectivity'.

by Associate Professor Kathryn Robinson, Sociology and Anthropology, University of Newcastle
The issues of 'land rights' and 'native title' are now of vital importance in Australia as they have been in every country recently experiencing decolonisation and indigenous resurgence.

Research into these issues is essential for informed debate about historical inquiry and appropriate redress. The questions quickly move beyond the familiar and comfortable frameworks of conventional western knowledge systems, not only because history, law and anthropology are all involved, but because the discourse is cross-cultural. The indigenous peoples of Australia and the Pacific perceived and ordered their universe in ways very different from those of Europeans. Their history, law and anthropology has its own particular qualities, premises and uses of evidence.

Until recently white Australia generally regarded Aboriginal knowledge systems as esoteric vestiges of a pre-industrial world, appropriate to the desert and the realm of private spiritual belief, but not part of a modern world order. That changed in 1971 when Mr Justice Blackburn, the judge in the Gove land rights case, rejected the Solicitor-General's claim that the plaintiff Aboriginal clans had no system of law because they had no definable community. He found instead:

"...a subtle and elaborate system highly adapted to the country in which the people led their lives, which provided a stable order of society and was remarkably free from the vagaries of personal whim or influence. If ever a system could be called 'a government of laws, and not of men', it is shown in the evidence before me."

This profound shift was the forerunner of the Mabo decision 21 years later.

But it is a long step from judicially recognising a system of 'customary law' to defining its content and modes of application. Words like 'ownership' prove highly complex both in the British and Aboriginal traditions and attempts to equate the British terms with the Aboriginal realities are hazardous.

Research in this area thus involves a great surge of interest in the evidence about Aboriginal or Maori or Melanesian culture - very close scrutiny of historical records for the earliest indications of who occupied what land, what they did with it and in what relationships with other groups. It also involves debate about the meaning of terms and the correspondence of terms in English and Aboriginal languages.

This process was begun in the Gove case and continued in the Northern Territory Land Claims Tribunal. The assessment of claims to Crown lands under the Native Title Act 1993 will bring it increasingly to the fore in south-east Australia. The knowledge systems of the universities and the legal cultures of white Australia will have to adapt.

In New Zealand, Maori customary property rights were recognised in the Native Land Act, 1862, but it is now the belief of many Maori, including the Chief Judge of the Maori Land Court, that the quasi-codification that followed seriously distorted custom, and excluded many Maori from rights to particular lands - rights which are being reasserted all over the country as the Crown moves to provide redress for breaches of its obligations under the Treaty of Waitangi, 1840.

In New Zealand, too, the research behind these processes is necessarily inter-disciplin-
"Scientists discover a link between silicon and melba toast. After 15 years exposure to air, silicon turns into melba toast, according to a group of researchers at the University of California. The findings caused panic among computer makers and other businesses which rely on the silicon chip. However, makers of processed cheese spreads were elated at the news!"

Off the Wall Street Journal 1982