Feature:

*Quality Education - Variations on a theme*

Big Picture
Achievements
Research & Scholarship
QUALITY EDUCATION: VARIATIONS ON A THEME

Do you need us to explain why we thought the issue of “Quality” in higher education would be an appropriate theme for this edition?

No. I don’t expect you do.

So... back in February we thought it would be a good idea to ask both the Minister and the Opposition spokesperson to put forward their policy position on this matter. Both agreed, and also agreed to the date we needed copy by. They sent us photos too. Happy to oblige, in fact.

However, by deadline date (i.e. after the quality league table was published), the Minister’s staffs stopped returning our calls. And were apparently unable to provide the copy any more.

So. Our apologies. We are only able to provide the Opposition’s policy. Do you need us to explain why?

Evelyn King

The Hon. Simon Crean, MP, Minister for Employment, Education and Training

CONVOCATION INAUGURAL LECTURE

On Wednesday, April 13th in the Medical Sciences Lecture Theatre (K202) at 5.30pm, Professor Nikolai Bogduk will deliver his Inaugural Lecture.

Doctor, can’t you stop my pain?

Professor Bogduk will mark his appointment to a Chair in Anatomy with a lecture to describe the plight of patients with chronic spinal pain, and how pain management requires a return to Vesalian basics.

All interested staff, students and community members are invited to attend.

Refreshments will follow the lecture.

RSVP to Ms Anne Burtoft, before Monday April 11th, phone (049) 21 6444.
QUALITY: HAS THE GOVERNMENT’S POLICY FAILED?

by Dr Michael Wooldridge, MP Deputy Leader of the Opposition, Shadow Minister for Education, Employment and Training

Members of the Committee on Quality Assurance in Higher Education have an enormous task ahead of them.

The Government has given these people, all capable and respected in their fields, the responsibility to make fine judgments about the quality of the teaching and learning, research and community service of 36 Australian universities. They have had to turn these findings into recommendations to the Minister for Employment, Education and Training, in a report which the Minister has opened to scrutiny by tabling in Parliament. And presumably their recommendations were examined closely by the bureaucrats of DEET before the Minister announced his decision on 8 March.

A tough job indeed.

The Government’s Quality Assurance Programme, earmarking very substantial funding - up to $76 million annually over the next three years - may well prove to be a costly and mistaken exercise in the centralist imposition of standards on Australian universities, based mainly on superficial examinations of the performance and outcomes of each institution.

This is not to say that the quality of higher education outcomes, and the assurance of that quality, are not relevant to our university system. On the contrary, they are very important.

Where the Coalition differs from the Government is on how quality is assured.

Rather than impose an external quality assurance mechanism on the higher education system as a whole, we believe that it is up to each university to assure itself, in the context of its own mission and goals, that it is performing strongly, that its academic and administrative practices are effective, and that the outcomes of these, be they in terms of well-regarded graduates, reputable research, or simply serving the community well, are of high standard.

Universities are already doing this, without the Government’s carrot and stick approach.

Institutions have long realised that they are accountable for their outcomes to the community as a whole, and this accountability is reflected in the reputations they make for themselves. Through their reputations, universities recruit their students, win commissions for industry-funded research and development, and attract and retain staff of the highest academic and professional standing. It is this factor which really underpins quality and diversity in the university system.

Under the Government’s present arrangements, however, reputations can be won or lost at the stroke of the Minister’s pen.

The Minister’s decisions, just announced, divide universities into six funding bands based on the Quality Committee’s assessments, and on the assessment criteria approved by the Government.

It remains to be seen what effects these rankings will have on the reputations of universities, particularly those in the lower funding bands. Will those which did not reach the top band be seen as, effectively, Second Division institutions, whose standing and reputations may be needlessly blighted as a result? Will, for instance, overseas students overlook an otherwise perfectly good university if they perceive that, on the outcome of the Government’s quality assurance processes, this university is second rate?

It’s also alarming that such consequences may arise from rapid and superficial assessments of universities. Because of the Government’s desire to award the first annual round of quality money early in 1994, the first assessment cycle of the Quality Committee has been a rush job, despite the undoubted good intentions of its members. Visits to universities by the Committee have been all too brief and the resulting assessments, based on the visits and documentation submitted by the universities, must necessarily lack great depth.

Like many in the university system, I read the Quality Committee’s report with great interest. But while it went into great detail about how and why the quality assessments were done, the report threw almost no light on why particular universities were placed in a specific band. The frustration of some universities with the outcomes is, in such circumstances, understandable.

Nothing about this exercise so far has altered my belief that, in endeavouring to impose its external quality assurance mechanism on the university sector, the Government is extending its centralist approach to higher education for little or no tangible benefit. Rather, I believe that quality process is counterproductive, and potentially very damaging to our universities.

If the Government was truly serious about promoting quality, the Coalition believes that it would be better to devote the earmarked quality assurance funds to addressing perceived areas of weakness and need in the system, such as research infrastructure and library services.

I hope that Mr Crean, in bringing a fresh perspective to his portfolio, will see that the Government’s Quality Assurance Programme is flawed and that, instead of encouraging quality and diversity in higher education, the programme is likely to undermine seriously the quality and diversity that already exists.

It’s not too late for the Government to change direction.
QUALITY ASSURANCE AT THE UNIVERSITY - 1994 AND BEYOND

by Mrs Gem Cheong, Academic Registrar

Prior to 1992, the word "quality" and its related concept of "total quality management" (TQM) did not feature strongly, if at all, in the lexicons of Australian Vice-Chancellors and their senior management teams.

In that year, "quality" - what it means and what it should or should not mean - was catapulted into prominence following the then Minister for Higher Education and Employment Services, Kim Beazley's announcement that in future, an amount equivalent to 2% of universities' operating grants would be available to universities as a reward for good performance.

Whilst universities obviously welcomed the availability of this source of funds, there was, and still is, much scepticism that the Commonwealth Government or any other external agency, can effectively judge quality, and indeed rank institutions on the basis of quality, in response to 20 page submissions to a Committee for Quality Assurance in Higher Education (CQAHE), and one-day institutional visits by review teams of the CQAHE.

Be that as it may, the judgments have been made: the Minister for Employment Education and Training, Simon Crean, has announced that all 37 universities will receive some of the $76.8m committed by the Commonwealth Grant to "rewarding quality assurance practices and outcomes in higher education". The universities have been ranked into six Groups, with Group 1 universities receiving 3% of their 1994 operating grants and Group 6 universities getting less than 1%. This University is one of 10 in Group 5 and its share of the quality cake will be 1% of its 1994 operating grant - a total of $1,132,000.

(For purposes of comparison, our share would have been 3% or $3,395,610 if we had fallen into Group 1; or 2.5% or $2,829,675 if we had been a Group 2 university).

Clearly then, whilst many senior academics throughout the higher education sector remain highly critical of the quality evaluation process, we cannot afford to take a relaxed view of it.

As a senior administrator, I recognise the important responsibility of the general staff to provide our students with a supportive learning environment.

Whilst the money carrot provides a strong incentive to take the quality exercise seriously, I believe that the institutionalisation of quality assurance practices is an intrinsically valuable pursuit, which we should voluntarily undertake with vigour and commitment.

For 1994, the CQAHE will be focussing on institutional teaching and learning processes and outcomes and it is important that we put in place a systematic process of monitoring, evaluating and improving all aspects of our work which impinge upon these areas. I believe we need to put in place a number of strategies aimed at developing quality assurance mechanisms for:

* ensuring the currency and academic in-
tegrity of our teaching programs and their fit with institutional goals;
• encouraging best practice in teaching and learning;
• providing our growing community of international students with a value-for-money quality educational experience;
• providing all students with a supportive teaching and learning environment;
• preparing our students more effectively for employment;
• giving better effect to the University's access and equity principles and particular support to its geographical catchment area;
• providing our students with the best possible physical environment we can afford, to do their learning;
• improving our data collection and management information systems as a critical tool for evaluating our achievement of the above-mentioned objectives.

This is a very wide and ambitious brief, but I believe that if we can demonstrate progress towards achieving these objectives during 1994, our position in the forefront of quality universities will substantially improve.

As a senior administrator, I recognise the important responsibility of the general staff to provide our students with a supportive learning environment.

Amongst other things, my office will shortly be commencing a comprehensive review of our admissions, enrolment and re-enrolment processes to ensure user-friendliness and cost-effective, accurate outcomes. What our students think of their experience(s) with “the administration” is an important part of our quality assurance process and we intend to survey first-year students, continuing students and international students by questionnaire to find this out. The responses will help develop our strategies for the improvement of service delivery.

...whilst many senior academics throughout the higher education sector remain highly critical of the ... process, we cannot afford to take a relaxed view of it.

ARCHITECTURE: A QUALITY COURSE

by Mr Bill Dowzer, B.Arch. (1993)

A recent survey conducted among 1992 graduates illustrated the current positive attitude towards The University of Newcastle's architecture course.

The survey was prepared by Michael Long of the Australian Council for Educational Research, for the Graduate Careers Council of Australia. Published in December 1993, it attempted to gain student reactions to various aspects of courses. The survey questioned quality of teaching, clear goals and standards, appropriateness of assessment, workload, generic skills and finally a response to overall satisfaction. The results were recorded with individual ratings and comparative results for the same course at other universities.

The positive response by Newcastle Architecture graduates may generally be attributed to the course's adoption of a problem-based structure in the mid 1980s. This change was implemented as a result of disillusionment with a traditionally based architectural education. The University's medical course was used as a role model. The very nature of an architecture degree encompasses a vast field of study; the present course addresses this issue by attempting to integrate all study areas in each phase of the course.

The question of clear goals and standards, provided one of the most positive results; probably due to the totally structured nature of the course. Goals and standards are clearly identified as a progression from first year to fifth year, as abilities and knowledge increase. In the final year, students choose their own project to develop their individual interests. The year culminates in the presentation of a final design thesis, recording the whole year's progress. In the final year exhibition, students can fully recognise, and have publicly acknowledged, their growth and achievement throughout the course. It initiates and provides a focus to all students in the faculty. It is through this final exhibition that the profession can also gauge the quality of work being produced. In recent years, the exhibition has also been staged in Sydney to create greater awareness and acceptance by the profession. This exposure to a broader audience has brought a positive response, providing Newcastle architecture students with good employment prospects in a very volatile economic climate.

The survey's positive response to the Newcastle architecture course is rewarding, especially when it's related to other schools of architecture. The success is due, in part, to the smaller number of students studying architecture at Newcastle and the faculty's ability to constantly address new issues. As a result, students always feel involved in the course structure and direction.

Above: Bill's final-year design thesis was based on the conversion of an immense, 200 metre turbine hall at Sydney's White Bay Power Station into a performing arts centre and conservatorium. The design earned him three prizes in 1993: the University Medal, the Institute of Architecture Design Medal and the Board of Architecture Prize. He now lives and works in Sydney.
QUALITY: AN UNDERGRADUATE PERSPECTIVE

With all this talk of quality education, we thought we’d give our students a chance to say what they thought of their University.

I like life on campus. They treat you like adults. It’s not like school.
(First year female nursing student)

The services and stuff are good. We had some people talk to us this morning about what’s on offer around the campus, which we appreciated.
(Female Newstep student)

I took the bus this morning. They come often enough but it took us 15 minutes to get through the roundabout out the front.
(First year female nursing student)

I think the campus is improving all the while. I’m quite happy with it. The moundings are not that pleasant, though. I’d prefer to see more trees.
(Second year male commerce student)

I don’t know what’s happened to the Union. I feel like I’m walking into a giant RSL or something. The food variety is good though.
(Second year male commerce student)

I’m overwhelmed. The campus is huge. I don’t know where I’m going and everyone else seems to know what they’re doing.
(First year female student)

I’ve just enrolled and I’m finding it pretty scary. It’s nothing like high school. I just feel so lost. People have been really nice though. And they’re all so different.
(First year female student)

The changes over the holidays are good. It looks really nice and I think that makes you want to come here, if you can see that something is happening, that people care about the place. I’ve been to other campuses and this is a nice one to come to.
(Third year female economics student)

This is my last year and I’ll be out of here soon. Looking back, it’s amazing when you first come here; it’s so big and wonderful. Now it seems so small, you know everything about the place and the people and it sort of loses that excitement. I’ll carry fond memories of the place though; it’s definitely been a pretty amazing experience.
(Third year female social science student)

The best thing about it so far was the O-ball. The worst thing is the lectures, I suppose.
(First year male engineering student)

I like it here. The Union’s got pretty good food in it. But it’s hard to find my way around. I’ve been here three weeks now and it’s getting better. It’s definitely heaps better than high school. You don’t have to wear a uniform or anything. You can just hang out, go to the bar when you want and things like that.
(First year male Arts student)

It really hit me a couple of days ago. It’s all up to me now. I’m not going to get into trouble or anything if I don’t go to a lecture or something. But, then if I don’t, the only person I’m hurting is myself.
(First year male English student)

This Uni. is good. It’s big enough without being stressful and it’s big enough not to be small. That’s not a very good explanation, but you know what I mean. The worst thing here is the engineers.
(First year male engineering student)

Newcastle wasn’t my first choice. I would have preferred to go to Sydney. But now I’m here, I really like it. It’s looking like it’ll prove to be great as a Uni.
(First year female student)
COUNCIL NOTES

The University Council met on 18 February. The following are some of the items discussed:

COUNCIL MEMBERSHIP

It was reported to the Council that the Chancellor, whose term was due to expire on 14 September 1994, would not be available for another term because of other commitments, particularly overseas. The Vice-Chancellor indicated to the Chancellor that he had consulted extensively and submitted the name of Mr Richard Charlton as Justice Evatt's successor.

The Council resolved to invite Mr Richard Charlton to accept election as Chancellor when the term of Justice Evatt expires.

It was reported to the Council that as Professor Frank Clarke's term as Deputy President of the Academic Senate would expire on 31 March, Professor Clarke was attending his last meeting of the Council as Deputy President of the Academic Senate.

Council was also informed that Associate Professor Jenny Graham had tendered her resignation from the Council to the Chancellor. Professor Graham had resigned because of potential for conflict of interest in her role as Assistant Vice-Chancellor. It was noted that Professor Graham would continue to attend Council meetings as a Council Officer.

APPOINTMENTS

• Professor Graham Goodwin as Dean, Faculty of Engineering, for four years from 1 January, 1994.
• Professor Frank Clarke as Dean, Faculty of Economics and Commerce for four years from 1 July, 1994.
• Professor Brian English as Deputy Dean, Faculty of Arts and Social Science.
• Professor Irena Madjar as Deputy Dean, Faculty of Nursing.
• Professor Harold Tarrant as Head of Department of Classics.
• Ms Marilyn Pedder as Head of Department of Physiological Health Nursing.
• Dr Peter Pfister as Head of Department of Aviation.
• Associate Professor Rick Middleton as Head of Department of Electrical and Computer Engineering.

AVCC NOTES

The AVCC Board of Directors met on Tuesday 15 February. Among items discussed by the Board were:

OFFICE BEARERS

Professor Don McNicol, Vice-Chancellor of the University of Sydney, had been elected unopposed as AVCC President for 1994-95 on 5 January. Professor Don Atkin, Vice-Chancellor of the University of Canberra, had been elected Vice-President for 1994 on 14 February.

QUALIFICATIONS FRAMEWORK

The Executive Director reported on meetings on the National Qualifications Framework on 8 February. While the AVCC favoured a linked, sectoral model in which the distinctions between the sectors were reflected and recognised, the model approved by the meeting of the AEC/MOVEET in December was a unified model.

The Executive Director expressed concern that the proposed Framework had the potential to reinvent a binary system. Moreover, since the release of the Framework documents, some TAFE institutions were offering degrees and there was a growing use of the associate degree in universities, not included in the framework.

The Board resolved to send a letter to the Chair of the Task Force (which has been appointed to take the Framework forward) indicating that the AVCC has continuing concerns and asking it to reconsider the framework.

It also resolved to ask each of the State organisations of Vice-Chancellors to consider raising the AVCC's concerns with their State Ministers of Education.

RESEARCH FUNDING INDEX

In December 1993, the Board established a Working Party to make recommendations on the distribution of the research quantum of the Operating Grant and the new Research Infrastructure Block Grant.

ACADEMIC SENATE MEMBERSHIP RULES

Ex Officio Members. In addition to the membership prescribed by the Act or the By-law, the ex officio membership of the Academic Senate shall include:

(a) the Deans of the Faculties;
(b) the Assistant Vice-Chancellor;
(c) the University Librarian; and
(d) the Director of Aboriginal Education.

Elected Members. Membership of the Academic Senate shall include:

(a) two members of the academic staff of each Faculty elected by such staff, provided that where the Dean is not a female, and at least one female member of the academic staff has stood for election, one of those elected members shall be female;
(b) one postgraduate student elected by and from the students, not being members of staff, who are enrolled as candidates for a postgraduate award; and
(c) two undergraduate students elected by and from the students, not being members of staff, who are enrolled as candidates for an undergraduate award.

ASTEC STUDY ON NETWORKS

An ASTEC Working Party has been formed following an announcement by the Ministers for Science and Employment, Education and Training in October, of a study to examine Australia's requirements for research data networks and the contribution AARNet might play in future developments.

CATASTROPHE REINSURANCE

The Board noted that the Executive Director had been asked by Unimutual, the insurance company owned and operated by universities, about the possibility of approaching the Government to provide a substitute for catastrophe reinsurance.

Unimutual is experiencing increasing difficulties in obtaining such insurance, following a marked hardening of the property insurance market over the past 18 months.
HUMAN FACTORS IN THE AIR

In 1977, the world's aviation industry was rocked by a paper published by US academic and pilot Richard Jensen, which showed that 70% of aircraft crashes were caused by human error.

In the same year, two Boeing 747s, one from PanAm, the other from KLM, collided on the runway at Tenerife in the Canary Islands. Over 580 people died. Investigation of the crash found that the accident had been the result of a series of simple human errors.

Despite such evidence, it is only recently that aviation training has started to incorporate a study of "human factors" into its training courses. The University of Newcastle remains one of the few organisations which makes this study a formal element of its course. Newcastle's Department of Aviation has attracted some outstanding staff in this field including Professor Emeritus Ross Telfer, Michael Ross, Ms Irene Henley and Mr Mark Wiggins but as yet the industry itself has little knowledge of the area.

To highlight the issue, the University's Institute of Aviation commissioned the Aviation Department to conduct a four day seminar to "train the trainers" in the human factors aspect of pilot training. The course involved participants and instructors from all facets of the industry.

Mark Wiggins, who co-ordinated the seminar, explained that its emphasis was on integrating the theory with practical examples and experience. "Each 'module' of the course was designed to do this. For example, Associate Professor Phil Moore from Newcastle's Department of Education looked at how one might go about preparing an instructional model for teaching human factors. Captain Roger Gee from Qantas and Captain Ken Patton from Cathay Pacific then outlined the human factors program that both airlines had recently implemented.

This 'module' brought together the theoretical model of "what should be done" and the application by practitioners who could illustrate "how we did it". The success of the course was gratifying to members of the organising committee. On the basis of the research data, this University places great emphasis on human factors in its degree program.

"The disturbing thing is that the rate of accidents is not changing ... in ten years time, it will mean ... one large-scale accident every two weeks."

Mark Wiggins equates the aviation situation with the computer industry. "Very few researchers have looked at how well people can actually use computers," he said. "It's only in the last few years with Macintosh and Windows etc. and the introduction of the term 'user-friendly', that we've been looking more closely at the human factor. The same principle applies in Aviation. Technology has been the most important thing. It's only now, with aircraft becoming more and more reliable, that we're finding that the proportion of accidents associated with mechanical failure is reducing, while the proportion associated with human error is increasing."

"The disturbing thing is that the rate of accidents is not changing and if we continue with the same rate per million departures that we have today, in ten year's time, it will mean in the order of one large-scale accident every two weeks. Something needed to be done."

Training in human factors associated with flying can enable pilots to better understand their personal limitations. It includes such elements as human information processing, aviation medicine, decision-making, communication, stress management and the design of instruments. An awareness of these factors can enhance the ability to perform effectively as a pilot.
UNI FLYING SCHOOL - LEADER IN AND OUT OF THE AIR

The University of Newcastle offered the first University Aviation degree in Australia. The recent purchase of the Cessnock-based Flying School shows the University's ongoing commitment to the Bachelor of Science (Aviation) degree.

"While there are now six other University-based aviation courses in Australia, we are the only one that owns their own flying school and has a fully integrated flying and academic program," said Professor David Finlay, the Dean of the Faculty of Science and Mathematics.

Professor Finlay and the newly appointed Head of the Department of Aviation, Dr Peter Pfister recently met with District Flight Operations Manager for the Civil Aviation Authority (CAA), Ms Mary O'Brien and others to discuss the recent acquisition and establish closer working links between the University and the CAA.

The aviation industry is starting to recognise the importance of a University degree in pilot training. Lecturer in Aviation, Ms Irene Henley, explained the reasons.

"The old days of pilots needing only to 'stick-handle' the airplane are gone."

"With flying programs such as ours, we can cover many other subjects over and above the actual physical act of flying a plane," Irene added. "Areas like communication, crew resource management, aerodynamics, writing skills, psychology, medicine, aviation law, navigation and education are an integral part of our course and these go towards making a more resourceful and effective pilot."

(Left to right) Head of Department of Aviation, Dr Peter Pfister, the CAA's District Flight Operations Manager, Ms Mary O'Brien, the CAA's local inspector, Howard McGillivray, Lecturer in Aviation, Ms Irene Henley and the Flying School's Chief Flying Instructor, Mr Adam Levay inspect one of the University's flight simulators.

INTERNATIONAL APPROACH TO MANAGEMENT

Congratulations to Dr Rachid Zeffane, Senior Lecturer in the Department of Management, who has been enlisted in a team of researchers from over sixty countries to examine and research aspects of Leadership, Organisational Practices and Culture.

The Leadership and Culture Project, as it has been named, is being co-ordinated by Professor Robert House from the University of Pennsylvania, and is receiving strong support from the U.S. Department of Education. In Australia, the project coincides with the Department of Employment, Education and Training's decision to appoint its own Task Force to look into and offer advice on the areas of leadership and management. The Task Force is currently conducting a series of workshops co-ordinated by the Australian Human Resource Institute.

The international project is in response to the fact that although more than 3,000 empirical social scientific studies concerning leadership have been conducted to date, that research has yielded only a small number of theories concerning the behaviour that distinguishes between effective and ineffective leaders. Available evidence suggests that, in most countries, over 60 percent of employed workers are dissatisfied with their supervisors and managers, and see their managers as ineffective leaders. Researchers involved in the project believe that by examining the issue of leadership and organisation practices worldwide, they will be able to offer advice on measures to strengthen management skills and develop leadership at all levels of business enterprises.

Dr Zeffane's involvement has recently been increased with his nomination, together with Mr Geoff Mayo, formerly an Associate Professor in Newcastle's Department of Management, as the main co-investigator representing Australia.
SEMINAR TO ALLEVIATE OUR WATER MANAGEMENT WOES

The problem of domestic wastewater disposal, particularly in unsewered areas, continues to haunt us.

Urban run-off and toxic blue-green algal blooms from excess nutrients in water systems form a major part of Australia's on-going water management problems. One of the contributing factors to the nutrient enrichment of water systems is the increasing failure of on-site wastewater disposal systems such as septic tanks, particularly in inland locations.

To help local governments cope with this growing problem, a course, hosted in conjunction with the Hunter Public Health Unit and the Environment Protection Authority, took place at the University in February. Titled "Wastewater Disposal - Options and Alternatives" it emphasised practical considerations such as site assessment, soil description, system sizing and consideration of alternative approaches.

According to Mr Phillip Geary, Lecturer in Environmental Management at The University of Newcastle, the difficulties being experienced are the result of a number of factors. "Many local government bodies, of which there are over 150 across the State, have developed their own requirements for on-site wastewater disposal," he said. "The lack of a standardised procedure for effluent disposal has led to many inconsistencies in approaches, system sizing and consequent performance."

"At many inland locations, land capability considerations such as soil permeability have been incorrectly assessed for the proper performance of these systems resulting in urban run-off, poor water quality and public health concerns. In addition, the increase in population density in rural areas has meant that those systems that were sufficient at the time of construction, are now completely inadequate," Phillip said.

"Our target audience for this course was Environmental Health Officers and Geotechnical Engineers from around the State. They are the people who can make a difference; they work at the planning stage, where it matters the most," he added.

"The fact that we reached our limit of 50 participants quite quickly, shows that local governments realise the need to improve on-site system performance, particularly in small communities. The good news is that improved performance of domestic wastewater systems can be achieved by the application of sound, yet basic, environmental management principles."

The success of the seminar has meant that a similar course will be held in June or July of this year. Further details can be obtained from the Department of Community Programmes on (049) 21 5551.

TUNRA’S FEES REDUCED

TUNRA is pleased to announce a reduction in its fee structure, effective from 1 April, 1994. From that date TUNRA’s fee will be reduced from 17.5% to 12.5% of invoice total, made up of:

- 10% TUNRA Service Fee
- 2.5% to fund the TUNRA/University Research Grants Fund

The fee reduction has been made possible by a careful review and reduction in TUNRA’s operating costs, together with the continued financial success of its trading divisions and royalty income from commercialised intellectual property as was noted in the last issue of Van Gogh’s Ear. TUNRA is also likely to be moving into new endeavours in the near future.

One of the most exciting aspects of the fee reduction is the setting up of the TUNRA/University Research Grants Fund to mark TUNRA’s 25 years of operation. It has long been an objective of the TUNRA Directors to increase the level of donations made by TUNRA to the University. The TUNRA/University Research Grants Fund will be administered by a joint committee from both bodies. Applications from individuals and departments for funding for a wide range of worthwhile purposes to enhance University life are welcome.

Above: Bob Patterson (right), Director of Lanfax Laboratories which specialises in environmental assessment, discusses one of his soil permeability experiments on display during the seminar with Co-ordinator, Phillip Geary.
Waste-water management has become a major issue for dairy product manufacturers in recent years. Community concerns about the state of our environment and the need for its protection have been increasing. This has led to a moral, and legal, responsibility for dairy factories to preserve the natural environment associated with their operations.

Historically, factories were built beside rivers to ensure a good supply of water, provide transportation for raw and finished materials and offered a convenient means of waste disposal. Contaminated discharges to rivers are no longer allowable, so much work has had to be done on waste minimisation and improved disposal techniques.

Norco Co-operative Limited has put in place a variety of systems to improve these areas. The reclamation of plant rinsings for various means of re-use, the concentration of cheese whey for use in ricotta cheese and other products, as well as land disposal methods for waste-water are all in operation. In addition, the value of cheese whey as a fertiliser has been examined.

An innovative process for the treatment of effluent from Norco’s Lismore factories has recently undergone commissioning and performance testing. The installation features an Induced Air Flotation (IAF) system for reducing the strength of waste-water prior to discharge to Lismore City Council’s sewer. The IAF cell was designed and developed by TUNRA’s Fine Particles Division, under the leadership of Professor Graeme Jameson. The cell, based on Professor Jameson’s own “Jameson Cell”, is able to separate milk solids from the waste stream using small bubbles of air which attach to the solids and float them to the surface. This “sludge” is continuously removed from the plant leaving the improved quality water to flow to the sewer.

Applications of this technology are well established in the mining industry where metals and minerals are recovered in the sludge produced from tailings waters. However, this is the first time that the technology has been applied to the dairy industry, anywhere in the world.

Pre-treatment of the waste before it passes through the IAF cell is critical to the success of the process. Firstly, all the effluent streams are collected and pumped into a large holding tank. This “balances” the strength of the waste-water.

The next step is to lower the pH of the liquid which is achieved by dissolving carbon dioxide gas in the waste flow into the plant. Addition of a chemical coagulant promotes the joining of the microscopic milk solids into larger particles and a liquid polymer is used to “toughen” these particles before passing into the flotation cell.

The installation of the IAF system will enable Norco to comply with Lismore City Council’s Trade Waste Policy. Milk products from vat and factory equipment washing, with their high potential for biological growth, often exceed limits for trade waste discharge to sewers. For example, 8.5 millilitres of skim milk or 5.5 millilitres of whole milk in one litre of clean water will not meet the required standard.

The cost of Council’s trade waste charges will be significantly reduced due to the improved quality of the effluent from Lismore. Initial tests on the plant’s performance have confirmed its ability to achieve the desired output.

(Reprinted, with permission, from "Norco Bulletin", February 1994 issue.)
Gastroenteritis is the second most common cause of child mortality worldwide. Only respiratory infections account for more deaths in children.

While the threat from gastroenteritis is certainly more serious in developing countries, Australian children are also dying from the disease.

The main culprit is dehydration. Children can become very dehydrated over a matter of hours and the reasons are understandable. If an adult loses 1 litre of fluid whilst ill, the most dramatic effect will be that they will be quite thirsty. If a child loses a litre of fluid, the results could be dire.

Research currently being undertaken in the Discipline of Paediatrics at the University of Newcastle is seeking to improve treatment of children suffering from the disease by monitoring the permeability of the gut during and after gastroenteritis. Using the newly purchased thin layer chromatography densitometer, researchers hope to be able to check how quickly a child is responding to treatment and what sort of diet they should be receiving during all phases of the illness. "If we know the period of time for which the gut is damaged, then we can know what foods to give and when to give them, so to best aid recovery," said Richard Henry, Professor of Paediatrics.

Up until now the only way Professor Henry and his colleagues could check the condition of the bowel, was via surgery; taking a piece of the bowel out for inspection. "Naturally, this can be very invasive and the decision to do so is never made lightly," he explained. "The densitometer will give us the same information and the child simply has to swallow two special sugars and have their urine collected over a 5 hour period. The densitometer measures the amount of these sugars present in the urine over the 5 hours. The ratio of the sugars present indicates whether the bowel is damaged or not."

The research is being undertaken by Cassandra Arnold, a medical student, during her one year Bachelor of Medical Science course. "The research is unique because no-one has looked into both the acute and convalescent phases of gastroenteritis, in children from both developed and developing countries, before," Cassandra said. The "developing" country in this case is Malawi, where Newcastle PhD student, Dr David Brewster is currently the Associate Professor of Paediatrics at the country's University in Blantyre. "The good news is that this is definitely a collegiate operation, not a master/servant one," said Professor Henry. "The Malawi people are very enthusiastic about the project. They've set up a densitometer there so that long after Cassandra has finished her year's study, David will be able to continue to use the findings to treat his patients." After conducting her initial tests in Newcastle, Cassandra will move to Malawi for two months at the end of June. "I'm looking forward to the Malawi component," she said. "A few years ago, I worked in Papua New Guinea for a year and am keen to work overseas again."

In February, the second Institute of Australian Geographers (IAG) Graduate Student Conference was held at the University. The Conference provides a forum, outside of the annual IAG Conference, specifically for graduate students to discuss matters of common concern and to debate significant issues from the sub-disciplines of geography. Discussing this year's three-day program, from left to right, are President of the IAG, Associate Professor Rob Warner (University of Sydney), Conference Co-ordinator, Mr Bruce Gorring (University of Newcastle) and Secretary of the IAG, Dr Morgan Sant (University of NSW).
PLEASE TEACHER, WHAT MAKES IT DO THAT?

This and many other questions from young, enquiring minds will drive the Region’s primary teachers crazy and all because of a new scheme to foster science learning for young children.

The scheme will provide a kit known as the Science Box to each primary school in the Hunter Region. It is the brainchild of the Newcastle Chemical Engineering Group based at the University.

About a dozen six year olds from Eleebana Primary School, where the scheme was trialled, accompanied their teacher to the launch. Their excitement was infectious especially when they experimented with the magnets, mirrors, prisms, stethoscopes, bubble blowers, small electric motors and other items designed to challenge young minds.

The Chemical Engineering Group’s Chairman, Mr John Waanders, says the Science Box is a resource kit designed to encourage children from five to seven years old to learn about the basic principles of science. He says it is tailored to supplement the existing science curriculum in primary schools:

“The boxes have proved enormously successful. The level of interest and enthusiasm both from teachers and children has been fantastic,” John said.

“It’s an excellent way to introduce science theories and methods to children in a safe, friendly and non-threatening way.

“We are hoping that each Science Box in the schools can be sponsored by an industrial or commercial enterprise. This co-operative interaction will have benefit not only for the schools, but also the sponsors and the community.

“By creating an increased interest in science and technology amongst primary school children, even those as young as five to seven year olds, we are paving the way for them to discover the fascination of science,” he said.

RESEARCHERS EXAMINE CAUSES OF HIGH BLOOD PRESSURE IN PREGNANT WOMEN

The cause of high blood pressure during pregnancy has long been a mystery to medical scientists.

However, a $90,000 research grant from the National Heart Foundation may help University researchers find some clues, or even the answer, to this vexing question.

Professors Tony Smith from the Discipline of Clinical Pharmacology and William Walters from the Discipline of Reproductive Medicine, have been awarded one of the Foundation’s 51 grants for 1994 and will examine substances in the blood of pregnant women as part of their research program.

During the course of the two year study, blood which is taken from the accessible veins on the back of the hand will be examined in laboratories. In addition small amounts of particular chemicals will be injected into these same veins to see how they respond.

According to Professor Smith, one of the many substances found in the blood may be the culprit.

“High blood pressure results when the blood vessels from the heart become narrower than they would usually be,” he explained. “In the last few years it has been recognised that some substances produced in the lining of the blood vessels themselves, cause relaxation.”

“During pregnancy other substances in the blood may neutralise or prevent relaxation of the blood vessels, causing high blood pressure.”

High blood pressure during pregnancy affects 10 to 15 percent of women. It is a serious condition and, if unchecked, can lead to fits, bleeding into the brain and, eventually, death. One in 10 women who experience high blood pressure during pregnancy will have problems with high blood pressure later in life. The baby also suffers because the placenta is damaged by high blood pressure in the mother. Often the baby fails to thrive, has to be delivered early and may spend time in neo-natal intensive care.

“In this country the condition can be managed, but in many other countries that is not the case,” said Professor Smith.

“Finding the cause of high blood pressure will assist with finding the treatment.”
Achievements

TEACHING EXCELLENCE AWARDS

It is widely accepted that universities are places for research, yet a university’s reputation equally depends on the calibre of its teaching staff. The closest relationship the community has with a university is the contact between students and those who teach them.

To encourage high teaching standards this University established the Awards for Teaching Excellence in 1992. The Awards, which comprise a $5,000 grant to be used in the pursuit of academic excellence, recognise the efforts of academic staff in enhancing the quality of their students’ education.

The Teaching Committee, which administers the Awards, recently announced that the 1993 award winners were Mr Phil Williams, from the Discipline of Behavioural Science in the areas of Medicine and Health Sciences and Dr Ron Banerjee, from the Faculty of Architecture. Both men are recognised for their enthusiasm in passing on their knowledge to students.

Phil’s philosophy of teaching stems from his recognition that individuals are unique and it is therefore important to retain their sense of dignity and their identity. He takes a personal approach and spends time getting to know his students, trying to tap into their way of thinking. He also believes in varying his teaching methods, giving and getting constructive feedback and, perhaps most importantly, being enthusiastic about his subject.

“Preparation is important, as is knowing your subject. But you must also have the ability to relate to your students in a meaningful way. That means knowing your audience.”

“...You can teach people if you can strike a chord with something already in their minds.”

He explained, “You need to know their age, fears, ambitions and weaknesses and you do that by having an open door, building bridges with students, getting to know them personally.”

Enthusiasm about his subject comes easily to Phil. He believes good health is fundamental to achieving goals. Poor health, he said, can impede everything you want to do. In his teaching Phil develops the idea that good health is a fundamental human right.

“As health professionals we need to always look at ways of improving and maintaining health for all Australians,” he said.

Dr Ron Banerjee was involved in setting up the Faculty of Architecture’s innovative and widely acclaimed teaching program, using problem based learning methods. He likes this approach and describes his teaching style as simple. His main objective is to convey the essence of his subject to the students in the best possible way, using various methods like structural modelling, computer aided instruction and site visits.

“I am a structural engineer and my subject is mathematically oriented. Architecture students tend to have difficulty in dealing with structural issues, particularly if they are based on mathematical concepts. My challenge is to make the subject interesting by relating seemingly abstract mathematical concepts to real life applications.

“A good architect should be able to empathise with the structure that he or she creates. I see my role as a person facilitating this empathising process.”

Ron’s greatest reward is to be contacted by former students who realise the importance of what he taught them.

Phil Williams and Ron Banerjee will be presented with their awards at the Vice-Chancellor’s reception to be held later this year.

“You can teach people if you can strike a chord with something already in their minds.”

The Teaching Committee also announced the recipients of the 1993 Teaching Grants Scheme. Sixteen applications were received for the $35,000 allocated from the Vice-Chancellor’s Discretionary Fund. The eight successful proposals were:

- Dr H K (Ron) Banerjee from Architecture for a computer graphics based education system to support a self-paced model of learning ($6,000);
- Dr S Chen from Curriculum Studies for an integrative model for Asian Language Teaching Methodology ($5,000);
- Mr S E Chen from Architecture for computer-aided, self-directed learning for Building Education - Pilot Project ($2,800);
- Mr D Condon from Educational Studies for computer based interactive video learning ($3,500);
- Ms T Davis from Communication and Media Arts for Sound and Image: Theory and Practice ($4,421);
- Dr P McGrath from Human Physiology for assessment of students by the use of variable weighting of distractors in multiple choice questions ($1,380);
- Dr E von Nagy-Felsobuki from Chemistry for information mapped chemistry for distance learning - Pilot Study ($4,800);
- Mr A Williams from Applied Science and Technology for the implementation of problem based learning in Technology Education ($3,300).
FRED BISHOP AND THE YOUNG MATHEMATICIANS

"...the solution of mathematics problems has an educational value which cannot be over estimated. It is the ladder by which the mind ascends into the higher fields of original research and investigation. Many dormant minds have been aroused into activity through the mastery of a single problem."

This arousal of young minds has earned Mr Fred Bishop, from Teaching and Curriculum Studies, an honour from the Australian Mathematics Trust. Fred has been awarded the Bernhard H. Neumann Award which was presented by Professor Neumann, on February 4.

The award recognised the 13 years Fred Bishop (along with his dedicated committee) has devoted to the Hunter Region Mathematics Competition, the largest of its kind in Australia. In 1993 a total of 13,067 students from 233 schools entered the competition and solved a series of challenging and non-threatening questions, designed to awaken an interest in mathematics.

Speaking at the awards function, Professor Peter O'Halloran, Director of the Australian Mathematics Trust said that Fred had shown great foresight, dedication and energy in meeting the need for sets of challenging, non-routine questions to be available to primary school students and their teachers. The Newcastle Permanent Building Society provided sponsorship and the competition is now an important date on the primary school calendar.

At the presentation Fred spoke of his frustration at being unable to challenge students who demonstrated abilities in mathematics.

“This problem frustrated me greatly, for I knew that if I could have a few moments alone with the gifted students, then so much could be achieved by encouraging them to reach their real potential,” he said. “I can vividly remember from my country teaching days that when I obviously had the good fortune to have gifted students in my school or class, I was never quite sure just how talented they were and whether they were being fully extended.”

His desire to address the needs of individual students continued to grow until he was asked by the Mathematics Curriculum Committee to identify mathematically talented children in the Upper Primary level and the Hunter Region Primary Mathematics Competition was devised.

"American Mathematical Monthly", First issue, 1894

IN PRINT

France may seem a long way from Newcastle, but for Dr Hilary Winchester, it has been a target of study for many years. British by birth, Hilary's interest was piqued her undergraduate years at Oxford.

Now a Senior Lecturer in the Department of Geography, Hilary has recently published her second book on geographical aspects of France. Entitled “Contemporary France” it examines the interaction of France’s human and physical geography together with the history of the nation. In particular, she profiles the post-war period, from 1945 until the present day, a time of enormous change for the country. “France was very rural up until 1945 and had experienced an extremely slow growth-rate compared to other European nations. Then during the post-war period, there was this enormous population growth coupled with a dramatic surge in urbanisation,” Hilary explained.

An interesting aspect of this increase in the birthrate was that it was partially the result of extremely strong pro-natalist policies which were introduced in the 1930s. “Postcards encouraging women to ‘use their bodies’ to ‘work for France’ were everywhere,” Hilary added.

Even more recently, posters portraying babies as “socio-cultural phenomena” were still encouraging women to “produce” for France. Hilary sees the reasons behind this pro-natalist movement as stemming from concern at their geographical position within Europe and their recent history. “They were worried. They had been beaten and occupied by Germany in 1870, then again during both world wars and in simplistic terms, they saw themselves as needing to re-stock.”

The resulting increase in population sparked a period of economic
“POWERFUL” COLLABORATION

"Collaborate with industry" is the emerging catch-cry of universities. After three years of collaborative effort by the University and Pacific Power, the Advanced Technology Centre was opened on February 21, 1994.

The Centre, a futuristic building, is unique in Australia. No other power generating body has allied itself so closely with a university by physically situating itself on campus. This provides a valuable resource for the Faculty of Engineering as well as areas of Science, Chemistry, Environmental Science, Medicine and even Philosophy. There will also be extensive opportunities for joint research.

"We serve and service the industry and our research efforts have already contributed millions of dollars to industry through savings and efficiencies"

Speaking at the official opening, the Vice-Chancellor, Professor Raoul Mortley, said the days were long gone in which universities saw themselves as isolated molecules in society. "The future lies in partnership," he said.

The $14M state-of-the-art Advanced Technology Centre exemplifies this philosophy of partnership. It houses the University's Institutes for Coal Research and Bulk Materials Handling Research as well as the 100 scientists, engineers and technicians who make up Pacific Power's Technical Services Team. Using $8M in equipment, they will conduct research into electrical and mechanical plant testing, metallurgy, chemistry and environmental monitoring.

A long history of collaboration with the University preceded Pacific Power's decision to re-locate its technical services branch. Pacific Power already funds two Chairs in the Faculty of Engineering (Fuels and Combustion and Power Engineering) and has provided seedling funds for the new Master of Engineering Science in Industrial Systems.

According to Professor Alan Roberts, Director of the Institute for Bulk Materials Handling Research, it is vital to have this contact with industry.

"We serve and service the industry and our research efforts have already contributed millions of dollars to industry through savings and efficiencies," he explained.

At the opening, the Minister for Energy, Mr Garry West said that the NSW electricity industry is entering a new era of competition as interstate trading develops and that the Advanced Technology Centre must help to maintain the competitive edge.

Above: Wearing their protective eyewear and viewing the testing of power pole insulators are (from left to right) Chairman of Pacific Power's Board, Mr John Conde, Chief Executive Officer, Mr Ross Bunyon, the Vice-Chancellor, Professor Raoul Mortley and the Minister for Energy, Mr Garry West.

Below: The unique interior of the new building.
VISITING PROFESSOR EXAMINES THE TAXING ISSUE OF TAXATION REFORM

Professor Cedric Sandford, who is visiting the Department of Commerce, finds the Australian electorate’s rejection of the Goods and Services Tax (GST) in the 1993 election to be of great interest.

Professor Sandford, Emeritus Professor of Political Economy and former Director of the Centre for Fiscal Studies at the University of Bath, is an observer of taxation reform and author of the book “Successful Taxation Reform: Lessons from Analysis of Taxation Reform in Six Countries”.

Professor Sandford will collaborate with Professor lan Wallschutzky on two research projects.

**Australia is one of only three remaining OECD countries without a Valued Added Tax (such as the GST)**

One first project examines the self assessment of income tax which has been partially implemented in Australia since 1986 and which will soon be introduced in the United Kingdom. Professor Sandford has been asked to brief Britain’s Inland Revenue Department on his findings.

In the other project, Professors Sandford and Wallschutzky surveyed voters in four marginal electorates in which the seat was lost by the coalition in the 1993 election. The accuracy of voters’ perceptions about the Coalition’s Tax Reforms were surveyed to see how their perceptions influenced the way they voted.

“We asked them if they changed their vote because of the GST and if they really understood the entire coalition tax package,” explained Professor Sandford. “In New Zealand the GST was successfully marketed along with reductions in income tax and a new welfare benefit as a whole package. Before reform was introduced only 30-35% of people were in favour of it but, when they had seen it in operation, 65% were in favour. People are rather conservative about taxation reform.”

Australia is one of only three remaining OECD countries without a Valued Added Tax (such as the GST) and, according to Professor Sandford, it will eventually be introduced here.

“Without it Australian governments will never be able to reduce income tax and will be forced to find other means of raising revenue,” he said, “However, because of its overwhelming defeat in the 1993 election, it could be a long time before it is accepted by the electorate.”

Commenting on Australia’s taxation reforms, Professor Sandford said our failure to index the taxation system to inflation was a disadvantage for lower income groups.

TRAVELLING NORTH

A sense of sadness leaving old friends and colleagues behind whilst looking forward to new challenges, summed up Ms Judy Wallom’s mixed feelings when she took up a new position recently at the Southern Cross University in Lismore.

Judy’s contribution to administrative procedures at the University of Newcastle has been much appreciated. Our loss is Southern Cross’s gain.

Judy has been appointed Director of Student Services at the newly established University.

With an enrolment of approximately 6,000 students, Judy will direct 40 staff members to co-ordinate student services, student admissions and examinations, enrolment, graduations, equity programs, student residences, accommodation, counselling, careers, the health service and other associated administrative areas.

“I am looking forward to working with multi-skilled teams which are client based rather than function based,” said Judy.

“In this way we hope to provide a more direct service, more accessible to students and more user-friendly,” she said.

As well as her administrative function at Newcastle, Judy was well known for her active role as Secretary of the Public Service Association as a staff-elected representative on Council and as Staff Grievance Officer.

“I will really miss the people at Newcastle. I have made many friends at the University and have been involved in many activities,” she added.
The Importance of a Good Entry

I remember the old gates which used to adorn the entrance to the University before the roundabout was installed. It was no accident that they were reminiscent of the tall gates at the main entry to the University of Sydney or Melbourne University or any of the universities that were established around the world before the beginning of this century.

We all know the importance of first impressions, and these traditional entry gates were meant to present a clear statement: This is a bastion of knowledge. Today, because of our awareness of semiotics (or is it deconstruction?), we also know that you cannot say one clear thing without saying many other things as well. The tall, solemn, even slightly forbidding, entrance to the traditional university with its mixture of stone and iron also said: this is a privileged place where mysterious intellectual protocols must be followed.

The university crest or heraldic emblem that often decorated the entrance drew on a rich medieval symbolic tradition to convey a defensive citadel. In this case a bastion against crass commercialism, vested interests, philistines and other enemies of intellectual freedom. The fact that the grounds of the long established universities in Sydney and Melbourne are relatively free of graffiti, advertising clutter and the commercial enterprises that crowd almost every other public domain in those cities, excluding churches, is not related to the efficacy of their security but a measure of the power of this architectural symbolism. That a university is an intellectually intimidating and enduring place was once made palpable from the moment of entry. As well, the symbol of the university as citadel highlighted the anachronistic concept that the university harboured the nemesis of hypocrisy and thinkers who were a danger to public complacency.

When the original entry gates were built twenty years ago, the University of Newcastle had a more conservative self-image and I don't think anyone will miss the old gates as they did look a little pretentious. Perhaps the tendentious nature of the brick and metal grandeur of the pillars and gates was made too obvious without a substantial fence on either side. But what does our new entry mean?

As befitting the aspirations of a modern university, the low stone walls of the new Western entrance immediately signify an egalitarian ethos. Maybe by accident, they also evoke a technology theme park, or the sort of entrance that might mark a corporation in California's Silicon Valley. Not that anyone would be confused that this is the hallowed ground of academe since the name The University of Newcastle is carved large and deep, not once, but three times in the traditional stone. I presume that the woodchip covered mini-Matterhorns that surround the stone walls are meant to signify the "bush" environment of our campus. After all, we are different to traditional universities, which often have acres of open grassed areas, in that we have designated such areas as 'non-social' spaces. We are a university of easy access, where "visitors are welcome", as the Eastern entry more directly notes. However, if only to avoid further cheap sarcasm, I will forgo a semiotic analysis of the Eastern entrance and get to the point.

A university should be a scary place because of fear of the critical punch of its intellectual muscle not because students are afraid to walk to the library at night through indefensible spaces. Tall gates and fences do more than secure a campus. They are enduring reminders that, in every sense, a university should be a hard place to get at and even harder to get into.

Ross Woodrow
Lecturer in Art Theory
Department of Fine Art

Dear Editor,

In the last issue of Van Gogh's Ear (Feb. p.17), Professor Noel Rutherford has rightly referred to his very long association with the University.

While Professor Rutherford's association goes back over very many years, I have always thought that the distinction and honour of having the longest association with the University almost certainly belongs to Mrs Pat Flowers.

Mrs Flowers began work in 1943 as Miss Pat Stephenson in the Technical College Library at Tighes Hill and since that time has had a succession of University associations. In the 1950s Mrs Flowers became University College Librarian at Tighes Hill and after a break, became University Librarian of the Conservatorium of Music. Pat Flowers now continues as a tireless worker and organiser for the University Bookfair.

Can anyone beat this record?

Denis Rowe
University Archivist

The Sacred Volumes

Long, long ago, during the fourth epoch of the great dynasty of Auch, there existed a small clan of Mutsy creatures whose only source of enjoyment was to learn. Their joy, their wonder at life, all the meaning that they derived from existence, came from their pursuit of knowledge and its application.

At the centre of all Muty knowledge were the Sacred Volumes - huge, beautiful books, bound in heavy leather and encrusted with wondrous symbols and runes. The Sacred Volumes were worshipped and revered by the Muty people, and, it is said, were actually the source of all that they learnt. These books supposedly contained the key to all knowledge and understanding, and were passionately guarded and protected by the Elders.

Many eons ago, the Muty clan died out and the Great Learning died with them. However, some say that the Sacred Volumes still exist and that they who find these most treasured of all books, can unlock the door to a new world of knowledge and wonder, as the Auch Muty people of so long ago once knew.

by Greg Boddy
Medical Communication Unit
As the University fraternity well know, we do not print anonymous letters to the Editor.
We do not, however, have an adequately defined procedure to count this one in, or count it out. We were going to set up a committee and take advice. On the other hand, we considered our publication's title and in the spirit of free debate have decided that a reprint of a letter, properly attributed to a reputable journal, with a name of some sort attached, and carefully forwarded to us by the "Department of Physics" was adequately sourced. We have written to thank Mr Shinbrot for his insights, in the name of international collaboration.

Editor

"ACADEMIC DECISION-MAKING"

On balance, although I support the University of Maryland in its efforts to survive under horrendous fiscal mandates, I would like to take issue with J.R. Dorfman's revisionist view of events (Letters, 3 Dec., p. 1499). In particular, Dorfman asserts that "The process used to accomplish [monetary savings] involved faculty, staff and students in every stage of the decision-making." As president of the Physics Graduate Student Association (PGSA) at the University of Maryland during the period in question (1991-1992), I have to say that I know of no efforts to involve either students or staff in the decision-making. On the contrary, I was present at several meetings about, and protests against, administration decisions.

Had I been consulted, I most certainly would have communicated the view of the majority of my fellow students and co-workers. That view is that a university serves two primary functions, research and teaching. And before a university takes any role interfering with either of these functions, it should make reductions in functions not related to research or teaching.

Administration is one example; large building projects is another. The University of Maryland is one of several universities at which a visitor will observe a truly extraordinary phenomenon: research and teaching support is trimmed to the bone at the same time that enormous resources are poured into several simultaneous construction enterprises. During the year that I served on the PGSA, the Science and Engineering library was forced to cancel subscriptions to more than 600 periodicals, professors in the mathematics department took turns working in the mailroom, seven entire academic departments were slated for elimination and as many new buildings were constructed. What was the first of these buildings to be completed? The administrative annex. At the same time that academic cuts were planned, the administration was actually expanding.

The administration's role was never to actively involve faculty, staff or students in these decisions. Its role was not to vigorously protest the budget cuts, to lambast its administration was actually expanding.

The following letter was recently discovered in the archives of the Department of Physics to the amusement of some of the staff...

10th October, 1968
Professor C.D. Ellyett,
Head of Department of Physics
UNIVERSITY OF NEWCASTLE

Dear Professor Ellyett,
This is to confirm our recent discussion on tree planting along the ring road in the vicinity of the Physics building. I have certainly not over-looked your representations nor the resolution of Senate of the 5th July, 1967, on this matter but advise that action has been delayed partly because of lack of precise definition of the eastern boundary of the proposed motorway along the western boundary of the University site, which is, essential for the planning of the landscaping development in this area, and partly because it is necessary to have expert advice on and supervision of landscaping work.

The latter difficulty has been overcome by the appointment of Mr Morris as Staff Architect, and, as you are aware, he has already had a lengthy discussion of the subject with Mr Kaye of your Department.

As soon as I receive firm advice about the boundary of the motorway from the Department of Main Roads I will submit a proposal for development to the Vice-Chancellor who, I expect, will approve its implementation subject, of course, to the availability of funds for the purpose.

Yours sincerely,
E.C. Parker, PLANNER

Dear Editor,
The longstanding commitment to the bushland character of the Callaghan Campus is highlighted by this correspondence. As part of the grounds restoration works (commenced during 1992), replanting and turf restoration is proposed for 1994 for the areas of the western campus.

Whilst similar constraints apply in the current economic climate for maintenance landscape works, as no doubt occurred in the early development years of the campus, re-orientation of limited grounds resources is focussed upon such restoration works wherever and whenever possible.

For thoughts on specific plantings to screen the new highway from the western campus, staff and students alike are invited to contact me on 21 5493.

Assistance in the re-vegetation of areas degraded or exposed over the years, and all ideas on the nature and management of the grounds are always welcome.

Peter Stevens
Curator of Grounds
P.S. As Leading Hand on the University campus, Mr Jim Prince was able to maintain a high standard of grounds under difficult conditions. With his retirement, it is appropriate to carry out his long-standing requests for regeneration plantings in these areas.
The ACU has recently established CHEMS - the Commonwealth Higher Education Management Service. The primary purpose of CHEMS is to assist Commonwealth universities and Government agencies by:

- providing management consultancy services on all aspects of university management and administration in respect to relations with governmental and other funding agencies;
- helping to define the management training needs of university staff and arranging training provision;
- disseminating advice and information on management problems, issues and developments.

CHEMS is currently preparing a register of consultants experienced in the management of higher education, particularly in Commonwealth countries. Anyone wishing to be included in the CHEMS register of consultancy services should obtain an application form from:

John Fielden, Director, CHEMS, Association of Commonwealth Universities, John Foster House, 36 Gordon Square, London, WC1H 0PF. Tel. 44 (0) 71 387 8572, Fax. 44 (0) 71 387 2655.