### THE UNIVERSITY 1983
#### BASIC INFORMATION

<table>
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<th>Founded</th>
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<tbody>
<tr>
<td>Commenced Teaching</td>
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<table>
<thead>
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<th>1975</th>
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#### 1975-1983

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<th>GRADUATES: Bachelor of Science</th>
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<td>Bachelor of Science with Honours</td>
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<tr>
<td>Bachelor of Arts</td>
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<td>Bachelor of Administration with Honours</td>
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<td>Master of Science</td>
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<td>Master of Arts</td>
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<tr>
<td>Research Higher Degrees</td>
<td>43</td>
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</tbody>
</table>

**TOTAL GRADUATES 1975-1983** 2,268
May it please Your Excellency,
I have the honour to present to you, on behalf of the Council of the Griffith University, the Annual Report of the University for 1983.

November 1984

Sir Theodor Bray, CBE, DGU
Chancellor
THE COUNCIL

Chancellor
Sir Theodor Bray, CBE, DGU, ex officio

Deputy Chancellor
Sir Allan Sewell, ISO, AASA, ACIS, FIMA, FIDA

Vice-Chancellor
Emeritus Professor F. J. Willett, DSC, MA Camb., MBA, HonLLD Melb., HonDEcon Q’ld., DUniv, ex officio

S. T. Rickson, BA Whittier, MA Hawaii, PhD Wash.
Senior Teaching Fellow, School of Humanities

Postgraduate Student of the University
P. M. Healy, BA
School of Modern Asian Studies

Full-Time Undergraduate Student of the University
B. J. Law
School of Modern Asian Studies

Part-Time Undergraduate Student of the University
N. Williams
School of Modern Asian Studies

General Staff
G. M. Harwood.
School Administrator, School of Science

B. A. Moffat, BCom Q’ld.
School Administrator, School of Social and Industrial Administration

Members of Convocation
C. Baram, BA (from 25 November 1983)
J. McPhail, BA (to 10 July 1983)
R. R. Bible, BA
Lecturer, Department of Education (TAFE)

P. R. Thoms, BA
Public Relations Consultant

Invited Member
The Hon. Sir Gordon Chalk, KBE, HonLLD Q’ld.
Company Director

Appointees of the Governor-in-Council
D. M. Buckley, BEd BSc Syd., DipEd N.E., MEdAd Q’ld., MACE
Lecturer, Department of Education, University of Queensland

The Honourable Mr Justice J. D. Dunn, BA LLB Q’ld., (to 29 March 1983)

The Honourable Mr Justice J. M. Macrossan, BA LLB Q’ld. BCL Oxf. (from 23 April 1983)

Sir Robert Mathers
Company Chairman and Managing Director

M. A. Howell, BA BEd Melb., MEdAdmin N.E., FACE
Headmaster, Brisbane Grammar School

A. J. Peel, ISO, FASA, AAUQ
Chairman, State Government Insurance Office (Queensland)

Nominee of the Director-General of Education
W. L. Hamilton, BEdQ’ld., MEd Alta., FACE
Deputy Director-General of Education, Queensland

Senior Faculty Staff
J.A. Rickard, BSc PhD Lond.
Professor, School of Social and Industrial Administration

C. W. Rose, BSc BE Syd., PhD Lond., FIP
Professor, School of Australian Environmental Studies

L. Ryan, BA Syd., PhD Macq.
Lecturer, School of Humanities

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PRINCIPAL OFFICERS
OF THE UNIVERSITY

Vice-Chancellor
Emeritus Professor F. J. Willett, DSC, MA Camb.,
MBA HonLLD Melb., HonDEcon Q’ld., DUniv

Pro-Vice-Chancellor (Academic)
Professor R.L. Segall, MSc Melb., PhD Camb., FAIP,
FIP

Pro-Vice-Chancellor (Staffing)
Dr R. S. Holmes, BSc PhD Q’ld., DSc

Chairman, School of Australian Environmental Studies
W. C. Boughton, ME N.S.W., PhD Q’ld.

Chairman, School of Humanities
Dr G. D. Saunders, BA Oxf., Dd’U Grenoble

Chairman, School of Modern Asian Studies
Professor C. P. Mackerras, BA Melb. and A.N.U.,
MLitt Camb., PhD A.N.U.

Chairman, School of Science
Professor C. J. Masters, MSc Auck., PhD DSc Q’ld.

Chairman, School of Social and Industrial Administration
Professor D. C. Limerick, BA Witw. and S.A., PhD
Strath.

Assistant Vice-Chancellor and Registrar
J. Topley, BEd Q’ld.

Business Manager
K. See, BCom Q’ld.

University Librarian
S. B. Page, BA Syd. (to 28 February 1983)
J. R. Cox, BA Stan., BLibSc Calif., MALA (from 31 October 1983)

Site and Buildings Manager
S. Ragusa, BE(Mech) Q’ld.
FOREWORD

For a variety of reasons, much larger numbers of students are now completing secondary schooling, and this year there were substantial demands on the tertiary education sector to provide additional places. Griffith University has welcomed this challenge. In 1983 we had 2,698 enrolled students, 12% more than our target in the original plan for the triennium.

Economic recession, technological developments and high levels of unemployment among the young have had, in recent years, significant effects on our universities. The distinguished Australian poet Vincent Buckley in his partly autobiographical book, “Cutting Green Hay” gives a picture of university life in the early post-war years:

“But universities are not, thank God, composed exclusively of achievers. Melbourne University in my young time was full of dedicated non-achievers, of whom some were quite important to its life. There was, for example, a group which inhabited the music room of the students’ union, with fortifying visits to library and pub. Even more than myself, they were besotted with music, and in their case it was entirely “classical” music. They were brooders rather than achievers, wordmen and listeners rather than scholars. They formed in effect a subculture; and they would sit around the walls of the music room exchanging comments or poems like cigarettes as they listened entranced to anything from Delius to Beethoven: most of all, to Mozart, who was the great love of their leader, Kenneth Hince, who was rather outranked by heavier composers in the official taste of Melbourne music. What you could rarely hear on the Australian Broadcasting Commission or in the Melbourne Town Hall you could listen to every day in the students’ union.”

Griffith University in common with most Australian universities, has progressively increased its proportion of part-time students. Moreover, many full-time students now work part-time because they need the money. These changes, and the shift from examinations to more continuous assessment, have reduced the opportunity to lead the more leisurely and broad intellectual life described by Buckley.

It is important in the present climate of utilitarian demands on universities to maintain the possibility of obtaining an education in the widest possible sense. This might involve students becoming simultaneously more sceptical and more enthusiastic — sceptical of received truths, enthusiastic about literature or music or physics.

Universities may have to re-assess assumptions held both within their own gates and in the community generally. If we are to produce graduates who can make a significant and continuing contribution to society we may need to make more rigorous demands on our students. It may not be adequate to ask students to pass a long series of minor hurdles. Of course, no form of university education devised to date has done much harm to the very best students. However, the less gifted students depend a great deal on a system which makes appropriate demands. In particular some requirement for an integration of knowledge seems to be essential. I think a judicious combination of leisure and rigour might be better than the present uniform pressure of continuous assessment.

R.L. Segall
Acting Vice-Chancellor
A TRIBUTE

In 1983, Professor John Willett resigned from the office of Vice-Chancellor. During his twelve years as founding Vice-Chancellor, John Willett devoted his enormous energy and his formidable and eclectic intellect unstintingly to the University.

John Willett came to the University with a considerable reputation as a practical scholar and a successful innovator in Organisation Behaviour and Organization Theory. This background, combined with a strong personality, a relentless intellectual curiosity and an intense commitment, then and since has made Griffith University what it is today — a highly successful new university, committed to exploring alternatives in higher education, oriented towards community issues and problems.

The establishment of a radical form of administration to match the radical plans for the multidisciplinary Schools and the search for appropriate staff were done with characteristic foresight and energy. In parallel a sensitive and imaginative site plan was encouraged and supported, and a major building programme was brought to fruition in circumstances where lesser chief executives would have come to grief.

More recently a major success was the bringing to Griffith University of the multifaceted advantages of the Brisbane Commonwealth Games. This showed John Willett’s flair for making and seizing opportunities for the advancement of the university interest. In similar vein, the network of co-operative ventures (ranging from the Brisbane NMR Centre to the joint degree with the Mt Gravatt College of Advanced Education) are all a tribute to the quick grasp of possibilities and the flexible approach to new issues which were the hallmark of John Willett’s style.

The enormous contribution of Jean Willett in her own right to many aspects of the well being of the University should also not be overlooked.

Few people at Griffith University have not learned a great deal from their foundation Vice-Chancellor and, as befits a university administrator, John Willett too was prepared to listen and learn, whether from students or colleagues.

It is as a consequence of John Willett’s vision and talents that Griffith University is so well placed to meet the challenges of growth that now confront it.
ACADEMIC ACTIVITIES

New Teaching Developments

The major new teaching activity in 1983 was the introduction of the part-time Bachelor of Arts degree programme by the School of Humanities. More than 200 students were admitted to the first offering of this programme, which has been specifically designed for part-time students. Quite distinctive features of the programme include the replacement of lectures with written study guides for each course, and the availability of non-compulsory tutorials that students may choose to attend either during the day or in the evening. Students may also vary the rate, within prescribed limits, at which they progress through the degree, and may undertake coursework for twelve months of the year.

The programme consists of three phases in which students are introduced to, and then develop, a number of current debates in the humanities and social sciences, particularly insofar as these debates bear on an investigation of Australia in the contemporary world. This involves consideration of issues such as the elaboration of national histories and myths, the links between community norms and individual identity, the development of cultural institutions, the changing meaning of work in society, the organization of communication within society, and the classification of knowledge within disciplines.

The mounting of this programme has met a need for a radical change to the forms and conditions under which members of the community with work and family commitments are able to undertake — and more importantly, to complete — degree studies. To make the programme effective, both faculty and general staff have had to learn new techniques for the planning and production of the written course materials, word processing and clerical operations, and the administration of an entirely novel system of tutorial scheduling to enable students to progress at different rates. The University continues to review the services and facilities it offers to part-time students with the objective of minimising the difference between the full-time and part-time study experience.

In the School of Science, the Graduate Diploma in Clinical Biochemistry was offered for the first time. The programme is the only one of its kind in Queensland, and is designed to meet a need for postgraduate training and the provision of graduates capable of employment in the areas of clinical pathology, medical research, industrial analysis and medical administration. The programme covers particular aspects of clinical biochemistry in depth, and gives considerable coverage of analytical instrumentation and other aspects of chemical pathology. A distinctive feature of the programme is the provision of on-site training in hospital pathology laboratories. As an introduction to some aspects of the Graduate Diploma programme, a theoretical and a laboratory course in clinical biochemistry are taught in the final year of the School’s bachelor degree programme. These courses also include training periods of seven weeks in the environment of a hospital laboratory. The University is pleased to record that these training periods are of mutual benefit to both the hospital and the University, in that students gain practical research experience and the hospitals gain short-term research assistance.

Diploma graduate, Judith Renouf, whose area of study during hospital training included the establishment of the nutritional status of neonatal infants.

Students were admitted to the honours year of the Bachelor of Administration degree in the School of Social and Industrial Administration for the first time. Of the seven students admitted, all completed the requirements of the degree and two gained first class honours. Dissertation topics included a study of women’s work, the effect of international corporations on development strategy, and a study of changes in union government.

The School of Modern Asian Studies saw the first graduates from its Master of Arts by coursework programme and a second group of 22 candidates commenced the programme in
1983. The programme focuses on Australia-Asia relations. Its objective is to have students study strategic, political, economic, and social aspects of Australia’s relations with Asian countries, and to undertake research in this field. The programme is offered on a two year, part-time basis.

Another new teaching development in the University was the establishment of the Centre for Continuing Studies in Language for a trial period. The Centre provides non-degree language courses in response to the needs of the community and sponsoring bodies. During the year, the Centre received government accreditation to conduct short-term English Language Intensive Courses for Overseas Students (ELICOS).

Other Developments

In the School of Modern Asian Studies, a major aid project — the Indonesia Social Sciences Project — was launched on behalf of the Australian Development Assistance Bureau. The purpose of the project is to assist the Social Sciences Foundation of Indonesia in the development of social science teaching and research in Indonesia. Dr Colin Brown, a member of staff of the School, was appointed Project Co-ordinator. The Project Advisory Committee, whose Chairman in 1983 was Professor John Willett, consists of Indonesians of various social science disciplines, drawn from Griffith and other Australian universities. The main Australian contribution to the project will be through the placement of Australian academics in a number of tertiary institutions in Indonesia. The levels of appointment will vary from professor to tutor, and locations will range from Jakarta, Yogyakarta and Ujung Pandang to much smaller, more isolated places such as Pekanbaru and Palu. By the end of 1983 two academic appointments had been made: Dr Jacqui Lineton to Universitas Hasanuddin (Ujung Pandang) and Dr Lance Castles to Universitas Indonesia (Jakarta). Dr Lineton has responsibility for teaching a one-year programme in research methods, taken primarily by younger staff members of Indonesian universities. It is hoped that many graduates of this programme will go on to higher degree studies, either in Indonesia or abroad. Dr Castles teaches in a new master’s degree programme in the social sciences which combines coursework and a minor dissertation. It marks a major initiative to restructure postgraduate education in the social sciences in Indonesia, and to strengthen the substantial interest of the School of Modern Asian Studies in research on, and teaching about, Indonesia.

A major activity in the School of Social and Industrial Administration was the planning of the new undergraduate Bachelor of Informatics degree. The new programme will focus on Computing and Information Studies, and is due to accept its first students in 1985. Four full-time faculty staff were appointed to the activity and they gradually assumed the major planning burden. The plan for the degree programme was enthusiastically endorsed by an advisory committee which included representatives from other major tertiary institutions in Brisbane, as well as computer professionals from commerce and industry. It is envisaged that the programme will make possible the offering of a greater variety of computer related programmes in many of the Schools of the University.

Another significant development during 1983 was the establishment of the “Queensland Management Schools”. This venture involved the School of Social and Industrial Administration, the University of Queensland and the Queensland Institute of Technology combining their resources to present a co-ordinated portfolio of management programmes to the business community. The “Queensland Management Schools” are able to offer the business community and the public sector the benefits of the largest management faculty in Australia. Although there were a number of teething problems during the year, the joint effort was very successful in making its presence known to the business community. One of the programmes offered was the Advanced Management Programme, which was organised and managed by the School of Social and Industrial Administration and was directed at specific levels of management in both the public and private sectors. The range of programmes offered is expected to increase during 1984.

In the School of Australian and Environmental Studies a specially configured VAX 11/730 computer facility was officially opened on 28 October 1983. The computer is dedicated to research work, principally on the large-scale numerical calculations required in solving systems of ordinary and partial differential equations. The VAX computer has been applied to the solution of a variety of problems, including the analysis of the movement of ground-water vertically and horizontally; the movement of solutes and fertilizers through the soil profile; and surface hydrology and surface water flows.

Admissions and Enrolments

The intake of 1,195 bachelor’s degree students in 1983 (as compared with 816 in 1982) was in excess of the University’s target, reflecting a strong demand for the Griffith approach to tertiary education. The total population of students rose to 2,698. This was due partly to an increased number of students remaining in the University to ensure the completion of qualifications (an Australia-wide phenomenon) and to the introduction of the new part-time BA degree programme in the School of Humanities.
In the School of Science, the increased retention rate, combined with the largest ever intake to the foundation programme of the bachelor's degree, showed a welcome resurgence of interest in the sciences. The number of students enrolled in the University on 30 April 1983 was:

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<tr>
<th>SCHOOL</th>
<th>BACHELOR'S DEGREE STUDENTS</th>
<th>HIGHER DEGREE AND GRADUATE DIPLOMA STUDENTS</th>
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<tr>
<td></td>
<td>PT* FT* TOTAL</td>
<td>PT FT TOTAL</td>
<td>PT FT TOTAL</td>
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<tr>
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<td>267 44 311</td>
<td>38 37 75</td>
<td>305 81 386</td>
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<td>4 10 14</td>
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<td>TOTALS</td>
<td>1613 1048 2661</td>
<td>96 141 237</td>
<td>1709 1189 2898</td>
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</table>

*(FT = full-time; PT = part-time)*

**RESEARCH ACTIVITIES**

1983 saw the University uphold and extend its reputation for research. Over $1.5 million in external funds were attracted by the University in support of projects as diverse as the chemistry of alcoholism, the genetics of intertidal gastropods, the development of PASCAL programming language, and Nationalist Chinese foreign policy. These funds, supplemented by University research grants and allocations from the budgets of Schools and Centres, supported research and other scholarly activity including the preparation of a significant number of publications and conference papers. The University’s research effort was enhanced by the success enjoyed by its staff in the annual granting round of the Australian Research Grants Committee in which research projects at Griffith were allocated substantial funding. The ever increasing competition for postgraduate places, numbers of postdoctoral fellows and longterm visitors from other institutions is, more than anything, an indication of the University’s success in research.

Expansion of the University’s research activities and facilities also continued in 1983. Purchase of major equipment, by the University alone as well as in conjunction with other institutions, resulted in the establishment of a scanning electron microscopy facility (jointly purchased with the Queensland Institute of Technology), a VAX computer facility, a luminescence photometer. There was also a significant expansion of activity by the Brisbane NMR Centre into the investigation of the properties of various materials and joint nuclear magnetic resonance studies in medicine with a major Brisbane hospital and the University of Queensland. The most recently established School of the University, the School of Social and Industrial Administration, also expanded its research activities substantially.

Some examples of the research carried out at the University are described below. A comprehensive review of the University’s research activities is contained in the “Griffith University Research Report 1983”, which is the companion to this document.

**Tourist Impact on Reef Corals**

For several decades, the Great Barrier Reef has been subjected to the effects of the ever-increasing tourist industry and the unique problems which humans can introduce to an ecosystem in which they normally are not present. The most direct effect is that of human trampling on the reefs exposed at low tide around the island resorts. One study, which is attempting to answer questions about these trampling effects is being undertaken by Dr Alice Kay and Dr Mike Liddle of the School of Australian Environmental Studies.
The study is a two-year project funded by the Great Barrier Reef Marine Park Authority with the hope that the information gleaned may permit better management of reef corals in areas visited by tourists. The experimental field work is being carried out on the 200 hectare intertidal reef surrounding Heron Island - a coral cay located on a platform reef 72km out to sea from Gladstone. The research is being conducted in three phases. The first phase involves an investigation of the effect on the coral colonies of people walking on the intertidal reef flat. The next phase involves the estimation of the extent of damage caused. In the third phase an attempt will be made to develop a system whereby the amount of damage can be predicted for a given amount of use, and eventually, related to types of reef composed of given species.

Drs Kay and Liddle believe that a coral species response to trampling depends on a variety of factors including the extent of direct physical damage, the survival and growth rates of damaged fixed coral colonies and coral fragments broken off colonies, and the growth rate of undamaged colonies. A considerable amount of work still needs to be done before the effect of human trampling is fully understood, but early results show that the survival of damaged coral colonies and fragments is a function of species, size and the degree of damage.

Dr Mike Liddle carrying out measurements on reef coral (Photograph by Dr Alice Kay)
NMR Imaging

Advanced technology has revolutionised medical diagnostic practice in the last decade to the stage where many diagnoses which formerly could only be made by surgical exploration can now be achieved non-invasively. A new era of medical diagnosis is developing with the successful testing of an advanced technology designed for investigating the human body - Nuclear Magnetic Resonance (NMR) Imaging.

NMR imaging technology is based on the fact that the nuclei of hydrogen atoms are able to receive and thus emit radio signals if they are placed within a strong magnetic field. The body contains large amounts of hydrogen in different chemical forms so that, if a person is placed in a powerful magnet, it is possible to investigate his or her body chemistry and, by using computer imaging methods, to create images of the body structure. Powerful magnets which are large enough to contain a patient have been developed in Europe and the United States especially for clinical NMR imaging, and field studies overseas show most encouraging results. Standard x-ray techniques for demonstrating body organs have already been refined by the use of Computerised X-Ray Tomography (CT); but where CT scans can only demonstrate anatomical features, NMR imaging can give indications of the state of the organs in regard to biochemical changes. In addition, NMR imaging is completely non-invasive and does not rely upon the use of potentially hazardous x-rays or the use of some times very uncomfortable contrast substances. It is an extension into clinical imaging of an established technique which is already in wide use in chemistry.

In 1979, the Brisbane NMR Centre was established as a joint facility of Griffith University, the University of Queensland, and the Queensland Institute of Technology. The Centre has six experienced NMR scientists on its staff and scientific expertise in NMR which is unrivalled in Australia. The University of Queensland and related teaching hospitals have established expert clinical teams eminently suited to evaluate this new technology both scientifically and in clinical practice. It is proposed to combine the expertise available in a number of projects concerned with the study of cancer, and of neurological, cardiovascular, liver and renal diseases. The full potential of NMR imaging for improving health is as yet unknown; however, the method has already proved valuable in the diagnosis of multiple sclerosis lesions in the brain and spinal cord, and is able to give information about brain development in normal and retarded infants. It is also able to demonstrate blood supply to organs such as the kidneys or liver and is likely to be very useful in the care of patients with coronary artery disease. There are also many areas of pure medical research into the diagnosis and understanding of human cancer.

Griffith University, the University of Queensland, and the Queensland Institute of Technology are, together, deeply involved in plans to provide facilities for clinical evaluation of this technology in Australia, the development of research into some of the exciting possibilities offered by NMR in medicine, and the development within Australia of the necessary team of physical and clinical scientists required for the successful development of this new diagnostic technique.

Professor David Dodderell (centre) of the School of Science with other scientists from the Brisbane NMR Centre
(Photograph by permission of the Courier-Mail)
Values and an Aging Society

Early retirement from the work force represents a growing threat to the level of personal satisfaction for, and political power of, older people throughout the developed world.

Dr John McCallum of the School of Social and Industrial Administration came to this conclusion after six months research and study at the Institute of Advanced Study in Gerontology and Geriatrics, Andrus Gerontology Centre, University of Southern California.

Dr McCallum’s research has highlighted how early retirement penalises people because of their age, and deprives society of their considerable skills and experience. It also suggested that there was a need for a close examination of the ways in which society can utilise those assets. For example, greater acceptance of part-time work would ensure society continued to derive benefits from the investment it has made in working lifetimes. Such an acceptance would require a change in attitudes towards welfare systems. At the moment older people who participate in part-time work are penalised through reductions in pensions and fringe benefits. Abolition of such penalties might encourage more older people to share their skills and experience with the rest of the community.

Many people are retiring at age 61 or 62, despite factors such as greatly increased life expectancy, and the technological revolution which means that it is now as economical to train an older person as a younger worker. This research suggests that highly skilled older people in many occupations have a considerable capacity to be innovative because of their store of experience, and that early retirement is depriving the workforce of these valuable skills.

EMPLOYMENT OF THE UNIVERSITY’S GRADUATES

Since 1978, an annual survey has been carried out on the employment of Griffith graduates. The survey, which analyses graduates’ situations shortly after graduation each year, is part of a national graduate destination survey.

Of the 89% of 1982 graduates who responded to the 1983 survey, 51% were in full-time employment; 30% were undertaking further full-time study; 5% were unavailable for full-time employment; 6% were casually employed; and 8% were unemployed and seeking full-time employment. There has been a fairly substantial rise in employment (from 45% to 51%) and a corresponding decrease in the percentage of graduates going on to further studies (from 36% to 30%). The unemployment figure is virtually identical to that reported in the 1982 survey of 1981 graduates. To give the University the benefit of their views on its teaching achievements, graduates were asked to comment on the relevance of their qualifications to their employment. The great majority of graduates made very positive comments about the way in which the degree prepared them for employment either by providing specialized training or by generally developing their research, analytical and communication skills.

Success in obtaining employment has been shown to be strongly related to timing of the search for jobs. Most large-scale recruiters of graduates finalize their graduate intake requirements before the end of the year and in many cases by August or September. This practice, combined with the competitive employment market in which today’s graduates find themselves, means that some graduates who do not seriously begin searching for employment until January or later, are still unemployed in April. Follow-up surveys conducted over a number of years have revealed, however, that most of those who are still looking for full-time employment in April, have found positions by September. The proportions of graduates employed in the various sectors have remained relatively constant since our first students graduated in 1978.

The following table shows the proportions of 1982 graduates employed in the various main employment sectors and provides comparison with corresponding figures for the previous year.

<table>
<thead>
<tr>
<th>Employers</th>
<th>% of 1982 Graduates</th>
<th>% of 1981 Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Government and Authorities</td>
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<td>State Government and Authorities</td>
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<td>Primary and Secondary Schools</td>
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<td>Private Industry and Commerce</td>
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As was the case in previous years, 1982 graduates obtained work in a wide variety of positions. For example, graduates from the School of Australian Environmental Studies obtained positions in computing, noise control, national parks and wildlife management, marine biology, soil conservation, teaching, and research in universities, government and industry. Science graduates obtained positions in medical laboratories, environmental chemistry, teaching, water resources, university and government research. Humanities graduates were employed in areas such as journalism, community relations, public service, teaching, research and retailing. Graduates in Modern Asian Studies obtained employment in government, industrial relations, travel consulting, teaching, clerical work and sales. The University's first graduates in Social and Industrial Administration were employed in accounting, industrial relations, work management, research, administration, systems analysis and personnel fields. Graduates who continued with further full-time studies were enrolled in honours, masters or doctoral degree programmes, diploma of education programmes for secondary and primary teaching, and the University's graduate diploma in Clinical Biochemistry. Some other studies included nutrition and dietetics, outdoor education and hotel management, as well as other bachelor's degree programmes and various overseas programmes of study.

The University’s Careers and Employment Service offered various programmes to assist graduates to find employment. They included a very successful seminar entitled “What can you do with an Arts degree?” which was attended by about 200 people including students, prospective students, graduates and the general public. In addition, representatives of between 40 and 50 organisations came to the campus as part of the employer visits programmes conducted in June and August.

THE UNIVERSITY AS HOST

Conferences and Seminars

In addition to sending a number of delegates to various seminars throughout the world, the University hosted several academic conferences and seminars during 1983. Two major conferences were organised by the School of Social and Industrial Administration, and one by the School of Science.

Accounting Association of Australia and New Zealand

The Accounting Association of Australia and New Zealand's Annual Conference for 1983 was hosted by the University and was attended by 220 academics and practitioners in accounting from various parts of the world. Keynote speakers were Professor Ron Weber (Professor of Commerce, University of Queensland) and Dr Arthur McHugh, Senior Advisor to the National Companies and Securities Commission.

Australian Society for Operations Research

The Sixth National Conference of the Australian Society for Operations Research was very well attended by delegates from a range of commercial, government and academic organisations. It was pleasing to note the level of overseas participation. The major speaker was Professor Martin Starr, Professor of Management Science and Director of the Productivity Centre at Columbia University, New York.

Australian Biochemical Society

One of the largest scientific meetings ever conducted on campus - the annual meeting and conference of the Australian Biochemical Society - was successfully held under the aegis of the School of Science in May and was attended by about 500 scientists from Australia, Japan, Europe and North and South America.

Science Policy Research Centre

The Science Policy Research Centre held a two-day conference on the “Political Dimensions of Technological Change”. Speakers included the Federal Minister for Science and Technology, Barry Jones, former Deputy Prime Minister, Dr Jim Cairns, environmental activist, Jack Mundey and union leader, Laurie Carmichael.

Australian Society for Limnology

In May, the University hosted the 1983 Congress of the Australian Society for Limnology. The theme for the congress which was attended by 70 ecologists from across Australia, was “Urban Streams - Nuisance or Resource”.

Association of South East Asian Institutions of Higher Learning

In June, a two-day seminar on the evaluation of urban and rural health care initiatives was arranged under the auspices of the Association of South East Asian Institutions of Higher Learning. The 24 participants, all experts in their fields, were from eight different countries and several Australian states. The aim of the seminar was to pool the knowledge of health workers in Third World countries and to examine strategies for health care change and improved public health.

Overseas Visitors

In addition to those delegates visiting conferences and seminars hosted by the University, there were a number of long-term visitors to the University throughout 1983. Ms Renee Berger, Director of Community Partnerships within President Reagan's Task
Force on Private Sector Initiatives, spent three months at the University under the University Travel Grants Scheme, and taught in the honours degree programme and the Advanced Management Programme mounted by the School of Social and Industrial Administration.

Professor Masumi Tsuda of Hitotsubashi University in Japan and Professor Shunichiro Umetani of Gakugei University, Tokyo, visited the School of Modern Asian Studies and contributed to the academic and social life of the School for periods of three and four months respectively. Professor Liu Chengpei of the Beijing Institute of Foreign Languages, China, visited the School with the support of a grant from the Australia China Council, and during his four month visit he taught Chinese, including Classical Chinese, to honours and postgraduate students.

Long-term visitors to the School of Australian and Environmental Studies included Dr Duncan Mackay, Postdoctoral Fellow, CSIRO, Dr Naomi Pierce, Fulbright Fellow, Harvard University, USA, and Dr Michael Bull of Flinders University, all of whom participated in ecological research work on butterflies. Ms Jennifer Williams of the Welsh National School of Medicine, Cardiff, participated in a research programme on self help health work, and Professor Anne Crichton, Department of Health Care and Epidemiology, University of British Columbia, Canada, conducted research into the development of health policy in Queensland. With the support of the US/Australia Co-operative Science Programme, Associate Professor Stuart Pimm of the State University of Tennessee at Knoxville, USA, participated in a research programme on food chains associated with water filled tree holes. Dr Yoshitaka Tsubaki, Nagoya University, Japan, also worked on a project concerned with the foraging behaviour of herbivorous insects.

Visitors to the School of Science included Professor C. de Duve, Nobel Laureate, and President of the International Institute of Cellular and Molecular Pathology in Brussels. Professor de Duve gave a public lecture titled "Today's Biology, Tomorrow's Medicine - Strategies in Medical Research", as well as a plenary lecture at the Australian Biochemical Conference held at Griffith in May. Another Nobel Laureate, Professor N. Bloembergen of Harvard University, USA, visited the School of Science as part of an Australian tour organised by the Australian Institute of Physics. Professor A. North of the University of Strathclyde, UK, spent some time at the school in May. In addition to reviewing research activities, Professor North lectured on polymer science to undergraduate students. Other visitors included Professor G. Shutz of the Molecular Biology Division, German Cancer Research Centre, Professor C. Parmenter of the Chemistry Department, Indiana University, USA, and Dr G. Bachstrand, Secretary-General, World Future Studies Federation, and Co-Director of the Swedish Secretariat for Future Studies.

As part of the preparation of the part-time bachelor's degree programme in Humanities, a number of academics visited the School for a period of four months from the Open University, UK. They included Mr Clive Emsley, Dr Paul Lewis, Mr Michael Wilson and Dr Tony Bennett. Dr Bennett subsequently joined Griffith University on a permanent basis as director of the School's part-time programme. In addition, the School of Humanities welcomed Professor Malcolm Bradbury from the School of English and American Studies, University of East Anglia, UK, and Mr Justin Kaplan formerly of Harvard University, USA, as a visitor to the Institute for Modern Biography. In the Centre for the Advancement of Learning and Teaching, exploration on the role that computer aided learning might play in the University was assisted by Mr Phil Butcher from the Academic Computing Services unit at the Open University, UK. He spent three months at the beginning of the year establishing systems, giving advice and conducting workshops in which academic staff learned techniques for computer aided teaching.

The University was particularly honoured by a visit from the recently appointed Ambassador of Japan, His Excellency Mr Kensuke Yanagiya.

As might be expected, the most significant student exchanges in the University occurred in the School of Modern Asian Studies which for some years has been establishing exchange arrangements with tertiary institutions in Japan in particular. During 1983, a new exchange agreement with Nanzan University in Nagoya, Japan, was signed. The agreement involves the exchange of one or two students each year from

Mr Yanagiya (centre), Professor John Willett and Mr Tsuyoshi Iwasaki, Consul-General for Queensland

STUDENT EXCHANGES

As might be expected, the most significant student exchanges in the University occurred in the School of Modern Asian Studies which for some years has been establishing exchange arrangements with tertiary institutions in Japan in particular. During 1983, a new exchange agreement with Nanzan University in Nagoya, Japan, was signed. The agreement involves the exchange of one or two students each year from
each university for a period of up to one year, and students will be able to gain credit for courses done successfully at the exchange institution. Nanzan University is particularly strong in international studies and has a large Centre for Japanese Studies for foreign students. Griffith students have attended the Centre in the past under an informal arrangement.

The exchange agreement with Otemon-Gakuin University which began in 1980 was extended in 1983 following a visit to Griffith by Professor Shigeru Nakamura, President of Otemon-Gakuin and Professor Yasuhito Toyama, Director of the Otemon-Gakuin Australian Studies Centre. This exchange agreement allows two Japanese students to study at Griffith for three months in each year and provides a good opportunity for Griffith students to develop their language skills on an equivalent visit. It is of particular benefit to students intending to teach Japanese in secondary schools.

As a result of the annual exchange programme initiated in 1980 with the Sonoda Gakuin Women’s College, Japan, a visit from 29 Japanese students and teachers was hosted in 1983. During the period in residence at the Village at Griffith University, the visitors attended an intensive English language course and various sporting and social events. This was followed by homestays in which the visitors enjoyed the hospitality of 22 Queensland families.

Other established exchange arrangements continued with Beijing Institute of Foreign Languages and Zhongzhan University in China, and with the Universitas Nasional, Indonesia.

THE UNIVERSITY'S EXTERNAL ACTIVITIES

Apart from student exchange agreements and a very active programme of involvement in the community, there are other external activities which are worthy of note. Many individual members of staff serve on external committees and boards and are involved informally with the work of other organisations.

Bachelor's Degree/Graduate Diploma in Teaching-Joint Programme

The University and the Brisbane College of Advanced Education (Kelvin Grove campus) offer a joint, integrated bachelor’s degree/graduate diploma in teaching programme for the benefit of Griffith undergraduates who wish to become secondary school teachers. Under the joint programme, students spend their first two years at the University undertaking degree studies. The next two years are shared between the University and the College, and involve degree and graduate diploma studies. Joint programme students who commenced their Griffith University bachelor’s degree programme in 1983 or later, will spend their third year attending the Kelvin Grove campus of the College. In fourth year, they will return to the University where they will study three Griffith courses and one College subject each semester. The College segment of the programme consists of curriculum studies, studies in education and teaching, some elective units as well as approximately 11 weeks of teaching practice. Some further teaching practice is also undertaken in the fourth year of the programme. Graduates from this programme have a remarkably successful employment record.

SIA Internship Programme

In addition to the active maintenance and development of close relationships with various business and government communities, the School of Social and Industrial Administration, establishes links with organisations through students who undertake internship projects as part of their degree studies. The organisations host students who complete projects of use and mutual interest. The student is involved in approximately seven weeks of work, at least three weeks of which is spent in the host organisation. A pleasing feature of this scheme is that a number of organisations offered full-time employment to students who had spent their internship with them.

Government Consultancies and Liaison

Two members of the School of Modern Asian Studies were involved in major consultancies for the Australian Government. Professor David Lim was a member of the Committee to Review the Australian Overseas Aid Program set up by the Minister for Foreign Affairs, while Dr Kevin Bucknall made a submission to the Senate Standing Committee on Industry and Trade investigation into Australia-China trade. Numerous other members of the University served on government based committees and commissions through 1983. At local government level, staff of the School of Australian Environmental Studies were involved with the Brisbane City Council in the planning and preparation of the Brisbane Conservation Atlas. This is intended to aid the management of the city’s natural environment. At State level, staff of the School of Australian Environmental Studies were engaged in research directed towards a better understanding and management of the Great Barrier Reef, while one member of staff provided expert advice to the court hearings of land claims by aborigines in the Northern Territory.
The University actively encourages public access to its sporting and social facilities and to community and continuing education activities. Many initiatives are taken by staff on an individual basis but the following are examples of University activities.

Annual University Research Lecture

The annual public research lecture was given in September 1983 by Dr David Pegg, a theoretical physicist in the School of Science. The lecture, titled "The River of Time", presented Dr Pegg's findings in his research concerned with the understanding of the concept of the flow of time. The evening was well attended by over 300 members of the University and the public.

Dr David Pegg received a commemorative medal from Professor John Willett (left) on the occasion of his Research Lecture "The River of Time"
Sabath Memorial Lecture
Dr Michael D. Sabath was a senior faculty member of the School of Australian Environmental Studies from its very early days until his sudden death in December 1980 at the age of 38. He was instrumental in establishing the School’s teaching programme and had instituted a research group of growing reputation and great potential. Through the generosity of his widow, and as a tribute to Dr Sabath, the School hosts the Michael D. Sabath Memorial Lecture. The annual lectures, of which there will be five, are given by distinguished ecologists. The inaugural lecture, which was held in March, was given by Professor T.R.E. Southwood, Linacre Professor of Zoology at the University of Oxford, Fellow and Vice-President of the Royal Society of London, Chairman of the Royal Commission on the Environment, and Chairman of the Board of the British Museum (Natural History). Professor Southwood’s address, “Mankind and ecosystems: perturbation and resilience”, was presented to an audience of over 200. The University honoured Professor Southwood with the award of the degree of Doctor of Science in recognition of his substantial contribution to a wide range of environmental problems of world-wide significance.

Open Day
On Sunday 7 August 1983 the University welcomed 7000 visitors to its Open Day. Events included seminar sessions for mature-age students to discuss what is involved in tertiary education, a “Chemistry or Magic?” show, demonstrations of Aboriginal and Asian dancing, screenings of Australian films, and an exhibition of the University’s works of art.

Sports Facilities
For the first time, a full-time Activities Officer was appointed to the staff of the Board of Community Services. The primary role of the Activities Officer is to promote, to members of the University and the public, the use of facilities such as the health and fitness centre, squash courts and tennis courts, and participation in activities such as aerobics, golf, tai chi and tennis.

Queensland Film and Drama Centre
The Queensland Film and Drama Centre based at Griffith is a community-access arts facility, which aims to provide for both community involvement and quality artistic production. The Centre is a non-profit organisation with membership open to any member of the community. Financial assistance during 1983 came from the Queensland Government Directorate of Cultural Activities, the Community Arts Board and the Crafts Board of the Australia Council. The Utah Foundation also made a generous grant for the purchase of a lithographic press. In addition the Centre raised funds from memberships, workshops, studio charges and donations.

Under its Crafts-Residence scheme, the Centre hosted Stephanie Outridge from May to November, who conducted a series of three community workshops and a children’s workshop, as well as a course for the Queensland Potters’ Association. An exhibition of her work took place in November in the foyer of the University’s Central Theatres.

In May the Centre became the first institution attached to a university in Australia to employ a Community Arts Officer. John Stanwell worked in the region south of the Brisbane River (including the cities of Logan and Ipswich, and the Albert and Redland shires), assisting in the development of community-based arts activities. Community arts projects developed by the Community Arts Officer, such as the co-ordination of a series of workshops for the Inala Community Theatre Group and the organisation of a training seminar for leaders of after-school and vacation arts activities in the City of Logan, attracted grants from the Theatre Board and the Community Arts Board of the Australia Council, and the Ipswich College of Technical and Further Education under its Extension Programme.

Twenty community workshops were conducted by the Centre in the areas of pottery, ceramic decorating, children’s pottery, screenprinting, poster making, photography, etching, drama, fabric painting, landscape and figure drawing, sugarlift and aquatint, and film and video. Enrolments for these workshops totalled 244. Studio spaces were also used regularly by groups and individuals. The Centre continued as a venue for meetings of the Queensland Amateur Television Association which provided free servicing of equipment in the video studio. The Centre’s Co-ordinator, Dr Margriet Bonnin, was convener of the University’s Works of Art Committee and assisted arts activities in the community through membership of the Board of Directors of the Brisbane Community Arts Centre, the Warana Literary Arts Committee, the Queensland Advisory Council for the Graduate Programme of the Australian Film and Television School, and the Visual Arts Board of the Australia Council.

Crafts Resident Stephanie Outridge, in the pottery, preparing for her exhibition of clayworks
Winter School

The staff of the Schools of Science and Australian Environmental Studies organized the fourth annual Winter School for country secondary school students. Thirty-five students attended the activity. Sessions included talks on "To be a Professional Scientist"; "Does Australia have enough Energy for the Future?" and "Lasers in Science". Professor Robert Segall taught in the area of physical science, while Dr Don Clegg covered the area of analytical chemistry and Dr Michael Irving taught clinical biochemistry. Students also had the opportunity to observe and take part in computing and microprocessor work. Other studies focussed on the use of resources and environmental management. One section of the Winter School covered human interaction with the environment, and included a contrast of pre-European and European societies in Australia. Contemporary issues, such as management problems of rainforests, the Great Barrier Reef and arid lands, were used to illustrate the focal points of the Winter School. The annual Winter School is now regarded as an important way in which the University offers to country secondary students the opportunity to sample study at a university.

Information Technology Week

Information Technology Week was sponsored jointly by the Federal Department of Science and Technology and the Australian Computer Society. It was hosted by Griffith University and organised by Dr Bert Cunnington in the School of Social and Industrial Administration. The programme consisted of a computer fair featuring displays of computers and latest technology, and special sessions designed to cater for the needs of the general public and specific groups, such as teachers, parents and citizens groups.

Understanding Asia

A further programme of talks to secondary school students was given by members of the School of Modern Asian Studies, as part of its "Understanding Asia" programme, and included material on Australia's relations with Asia, and on Chinese and Japanese language. In July the School also held the first Chinese Language and Indonesian Language Speech Contests for Queensland secondary schools, convened by Margaret Bocquet-Siek. Four secondary schools took part in the contests: Brisbane Grammar School, Church of England Grammar School, St.Margaret's, and St. Paul's. A total of 34 students was involved. Nearly all the Chinese and Indonesian language staff members of the School participated in the adjudication.

CENTRE FOR THE ADVANCEMENT OF LEARNING AND TEACHING

1983 demonstrated to the Centre that one of its early expectations - that it would become less involved in initial academic planning and more concerned with the review and revision of established programmes as the University evolved - had been ill-founded. Pressure for continued growth in the range of the University’s offerings meant that CALT faculty staff found themselves involved in planning two major new academic programmes, and at the same time engaged in the full spectrum of review activities - from minor revisions to single courses to major restructuring of degree programmes.

The planning of one new programme, the Bachelor of Informatics degree, provided a
unique opportunity for CALT to put into practice for the first time a fully articulated theoretical approach to planning a major curriculum. The usefulness of that approach was tested in the very thorough planning documentation of the programme: it will be further tested when the first students enter the programme in 1985.

The Centre’s Audio-Visual section provides services in graphics, photography, film and slide projection, video and sound recording and editing. At a time when those services are in increasing demand, the Centre has also been developing its capacity to use new technologies - such as computer graphics - and to integrate existing media and services, to produce new and readily usable teaching and publicity materials. One such project, a 16mm film on plant and soil research, was developed for the School of Australian Environmental Studies, and has been successfully shown in the United States and the United Kingdom.

THE UNIVERSITY LIBRARY

February 1983 saw the close of an era at Griffith University, with the retirement of its Foundation Librarian, Mr Sid Page. As the University’s founding librarian Mr Page’s contribution to the University’s development was a vital one. His interests and influence extended beyond the Library to other areas of University life through his work as Chairman of the Vice-Chancellor’s Concerts Committee and the University’s Works of Art Committee. Mr James R. Cox came from the University of California in Los Angeles to take up his appointment in October as the new University Librarian.

A significant stage in the history of the University Library was reached in 1983 when the year’s acquisitions brought the total volume holdings for the first time to more than one-quarter of a million. Additions to the Library’s holdings during 1983, increased by 6.5% overall. The number of additional monographs was however sharply down from the previous year as a result of increased costs. Loans of all categories to borrowers increased by about 11% over 1982 and there was a significant increase in interlibrary borrowing and lending activity. The Library’s computerized information retrieval services were increased through access to the Australian database utility, AUSINET, which added a considerable and significant number of national databases of literature information to the store of online indexes and abstracts available to Library users.

The availability of space in the Library to accommodate both the book stock and readers has been, and will continue to be for some time, a critical issue of concern. In early 1983 extensive rearrangements were made to make more efficient use of space. The rearrangements allowed the Library to accept custody of a major collection of some 5,000 volumes of Australian and Irish material. This, the Alan Queale Collection, was the gift of the Trustees of the Lionel Lindsay Art Gallery and Library Trust. It will greatly enrich the resources of the Griffith University Library in support of Australian studies, as it contains important 19th and 20th century Australian material.

From the Queale Collection

20
research report
1983
INTRODUCTION

During 1983 the University upheld its reputation as a centre for excellence in research. The University attracted over one and a half million dollars in external funds in support of projects as diverse as the chemistry of alcoholism and the genetics of intertidal gastropods, the development of the PASCAL Programming Language, and nationalist Chinese foreign policy.

These funds, supplemented by University research grants and support from individual Schools and Centres, resulted in the production by faculty members, their students and co-workers of 14 books, 39 book chapters, 170 journal articles and over 1,100 papers delivered at conferences. A large number of research reports and other works were produced in addition to those mentioned already.

For a University as modest in size as Griffith this productivity was substantial indeed. This performance was underlined by the success enjoyed by University members in the annual granting round of the Australian Research Grants Committee.

The University community looked in 1983 to a gradually increasing amount of support as the stated policies of the newly elected federal government were expected to come into effect. Indeed, the maintenance and development of the research base of universities is vital if Australia is to maintain its place in the international community of scholars. In addition, of course, such a research base feeds information and ideas into the community at large, serving to underpin wider developments in education, industrial and agricultural expansion and diversification, the management of our manifest natural resources, and equally vital activities in financial, recreational and cultural activities.

The University also continued its expansion in research activities and facilities. Purchase of major equipment, both solely by the University and in conjunction with other institutions, resulted in the establishment of a scanning electron microscopy facility (jointly purchased with the Queensland Institute of Technology), a VAX minicomputer and a luminescence photometer, and the expansion of the activities of the Brisbane NMR Centre into nuclear magnetic resonance studies in medicine (in conjunction with the University of Queensland and a major Brisbane hospital). The most recently established School of the University, that of Social and Industrial Administration, together with its newest activity in computing and information studies, has expanded its research activities substantially and, as will be seen from the accounts of research in the School, is now enjoying considerable success in this area.

Grants awarded, books written and papers published are but the outward and visible signs of research activities. The real achievement of the University in research is less tangible and, arguably, more important. The University has succeeded in providing, in most areas, an ambience for research which both maintains the enthusiasm of its workers and urges them to greater efforts. The ever increasing numbers of postgraduate students, post-doctoral fellows and long-term visitors from other institutions is, more than anything, evidence that the University is succeeding in providing an appropriate environment for research activities. There remains no room for complacency, however, either within the University or in the wider arena of the community at large. It behoves research workers to make public their findings not only to their academic colleagues but to the wider community which supports them. This does not mean an unreasonable subjugation to ideas of pop-'relevance' but a proper concern with the explaining and justification of work in the context of the universities' very special role in the overall national research effort - one quite different from that of the C.S.I.R.O., for instance, but one which enjoys a much less desirable public image than that organisation. No non-trivial research is 'irrelevant' in a society such as ours; time and time again it has been shown that discoveries motivated 'only' by intellectual curiosity have provided the basis for technology which subsequently, sometimes decades later, has become vital to the well-being of the community at large. We need to spend more time, perhaps, pointing this out as it is only in the universities that such fundamental work is the primary occupation of research.

R.L. Kitching,
Chairman,
Research Committee
SCHOOL OF AUSTRALIAN ENVIRONMENTAL STUDIES

Research activities in the School of Australian Environmental Studies reflect the diversity of environmental studies in general, and the wide range of academic backgrounds and interests among the members of the faculty staff. New research grants totalling $251,905 were attracted in 1983.

Dr M.J. Liddle, was awarded a grant of $32,000 from the Great Barrier Reef Marine Park Authority to examine the impact of tourists trampling on coral reef flats, such as the reef around Heron Island where the study is concentrated. Dr Alice Kay, a marine biologist, was recruited as a post-doctoral research fellow to work on the project. The research involves study of the effects of various levels of trampling in a previously untouched area, and study of the recovery of a trampled area when trampling is stopped. The results will provide information on potential damage according to the level of tourist traffic, the location of the reef and the species of coral, and will contribute to better management of the Great Barrier Reef.

Three of the academic staff of the School – Dr G.T. McDonald, D.J. Pitts and E.C. Stock – in conjunction with the Brisbane City Council have prepared plans for the preparation and publication of a Brisbane Conservation Atlas, to assist in the conservation and management of Brisbane's natural environment. The Council already maintains a Land Data Bank which records the location, valuation and zoning of public and privately owned land in the city area, and has developed an Open Space Inventory which lists some 800 park and recreation reserves within the city area. The researchers aim to combine much of the information already held by the Council and in the National Trust Register with details of all natural resources and assets in the Brisbane area, and provide guidelines for the management of those resources.

During 1983, a VAX 11/730 computer system was installed in the School primarily to support the research of the School. The system has already been applied to a variety of problems involving large-scale numerical calculations including the movements of groundwater, the movement of solutes and fertilisers through soil profiles, and the water balance of catchment areas.

Institute of Applied Social Research

The Institute of Applied Social Research (IASR) was established in 1977 with a foundation grant from Mr V.M. Hancock and Mr J.P. Hancock of Hancock Brothers Pty. Ltd., who provided a private benefaction to allow the University to undertake socially relevant research in Queensland. It is a research centre within the School, the primary objective of which is to bring together faculty staff who have interests in applied research and in seeking funding for research into problems of community interest. The IASR is administered by a Management Committee which is responsible to the School and to the University Council, and by a Director who is responsible for the day-to-day running of the Institute. Since July 1981, Dr Roy Rickson has held that position.

Research in the IASR has focused on a number of main themes in response to community needs:

- impact studies of major projects and planning proposals including the declaration of the Cairns section of the Great Barrier Reef Marine Park, irrigation development in the Upper Darling Basin, impact assessment of industry on the Darling Downs, land-use conflict in the Moreton and Boonah Shires, and other projects associated with the conservation and development of urban rural land;
- fisheries economics and management studies covering most sections of the Great Barrier Reef and south-east Queensland;
- social indicators and population data including the development of an information system, and publication of an Urban Social Atlas of Brisbane, and the preparation of a general conservation atlas for the city of Brisbane;
- evaluation of government programmes, in particular the Queensland Defensive Driving Course;
- studies of attitudes and responses to environmental degradation including industrial pollution abatement, adoption by farmers of soil conservation technology and practices, and relationships between professionals and policy-makers in the private and public sectors.

The IASR has attracted funding from a wide range of government agencies (including the Australian Research Grants Scheme), private companies, community groups, city councils and the University.

One of the principal features of the work of the IASR is its basis in interdisciplinary team work. Each project draws upon a range of expertise from the social sciences including economics, sociology, political science and psychology and, given the substance of research, related bio-physical and engineering expertise in soil science, hydrology, acoustics and marine biology. This enables the Institute to tackle a range of research problems beyond the scope of single disciplinary groups.
RESEARCH PROJECTS AND ACTIVITIES

Staff

R.D. Armstrong and Dr E.K. Christie
Phosphorus nutrition of rangeland forage plants
The project examines the adaptive mechanisms in plants found on low phosphate soils. The work aims to develop techniques for selecting plants which can establish successfully on infertile soils; and, in addition, identify economic plants which have a lower fertilizer phosphate requirement.

Dr A.H. Arthington
Ecology of Fraser Island lakes
This project analyses the rate of movement of a dune blowout into Lake Wabby and its effects on ecology of fauna, especially benthic invertebrates.

Dr W.C. Boughton
Computer simulation modelling of the water balance of catchment areas
Computer modelling is used to simulate the water balance of catchment areas in order to estimate the amounts and rates of runoff which will occur from various amounts and rates of rainfall.

Frequency of major flood events in eastern Australia
This project continues the development of statistical techniques for the analysis of streamflow records in order to estimate the probabilities of future flood events of various magnitudes.

Management of water supply catchment areas
Some uses of land can affect the quantity and quality of runoff which may be required as a water supply for urban populations, irrigation, industrial purposes or wildlife preservation. This project involves a study of some of the conflicts between the uses of land in catchment areas and the needs of those who use the runoff water.

Dr W.C. Boughton and D. Cassel
Water supply catchment areas
The project focuses on the hydrological and geomorphological changes that are occurring in the streams that traverse the Brisbane urban area (Enoggera, Oxley, Norman and Bulimba Creeks) as a result of excavation of sand and gravel for building materials, construction of water supply and flood detention basins, diversions of streams for flood mitigation, and major works such as the construction of freeways and airports.

Dr W.C. Boughton and Dr R.J. Neller
Modelling urban stream channel changes
This project examines the hydrological and geomorphological changes that are occurring in the streams that traverse the Brisbane urban area (Enoggera, Oxley, Norman and Bulimba Creeks) as a result of excavation of sand and gravel for building materials, construction of water supply and flood detention basins, diversions of streams for flood mitigation, and major works such as the construction of freeways and airports.

Dr R.D. Braddock
Inventory control of perishable items
In general, inventory control has been developed for non-perishable items where the shelf life is infinite. Perishable items have a limited shelf life, and the life-scale of the product affects the control policies. Of special interest is the management of perishable medical supplies such as blood, blood products and drugs.

Professor A.A. Brownlee
Family welfare policy analysis
This project involves programme evaluation and related research designs in family welfare policy assessment.

Political epidemiology
This project investigates the operation of the committee system and inter-departmental committees in dealing with environmental and community health issues.

Professor A.A. Brownlee, Dr C.M. Taylor* and K. Rowley
Alternative health care
This project involves the development of research design aimed at identifying alternative health care benefits in competition with traditional care benefits; and the application of this methodology in communities characterised by young families.

Dr C.P. Catterall and Professor J. Kikkawa
Behavioural ecology of silvereyes
Aspects of the behavioural ecology of a colour-banded population of silvereyes are under investigation. In particular, the decision rules governing the birds' use of different quality patches in the environment and the structure of foraging flocks are being studied.

Dr C.P. Catterall and Dr I.R. Poiner
Population biology and spatial dispersion of strombid gastropods
This study is investigating the factors affecting growth, survivorship and distribution of the coral reef gastropod, *Strombus luhanus*. Populations...
are highly aggregated and show density-dependent variation in adult size. The roles of food, predation and larval dispersal in producing this pattern are being assessed. The effect of human exploitation on the species is being predicted and investigated.

Dr M.L. Coates and Dr D.W. Connell
Uptake of lipophilic compounds by aquatic organisms
A series of experiments are now in progress on the uptake of n-alkanes by fish. These characteristics are being correlated with physicochemical constants such as partition coefficients.

Dr A.K. Chase
Site mapping
This project involves the location and placement of Aboriginal sites and territories on maps, from previous fieldwork.

Textbook
Preparation of a small textbook for secondary schools on Aborigines and land is underway.

Dr A.K. Chase and Dr B. Meehan*
Upper Daly land claim under Land Rights (NT) Act
The aims of this project are to research and document claims by three Aboriginal groups (Nanggumerri, Wagiman, Wardaman) in the upper Daly River region of the Northern Territory, and involves preparation of a claims book and participation in a court hearing before the Aboriginal Land Commissioner.

Dr E.K. Christie and Dr P.G. Hughes*
Property size and drought management in the pastoral zone
Computer simulation exercises have been applied to develop an ecologically-based method for estimating viable living areas in the pastoral zone. The model also is being applied to livestock management decision-making during droughts.

Dr E.K. Christie and M. Smith
Ecophysiological effects of heat stress in semiarid plants
The project investigates the role of water and high temperature on plant species regeneration in the pastoral zone.

Dr E.K. Christie and S.L. Smith
Soil nutrient supply and defoliation effects on competition in rangeland forage plants
The project aims at improving the quality of forage for livestock in one major land system in the pastoral zone by investigating ecological and economic methods for establishing desirable plants on degraded grazing lands.

Dr D.W. Connell and Dr M.L. Coates
Petroleum hydrocarbons in the Great Barrier Reef ecosystem
Analyses of corals, fish holothurians, algae and clams have been completed. Petroleum hydrocarbons were detected in only two limited locations. Transfer patterns of hydrocarbons were developed from the data.

Dr D.W. Connell and G.R. Shaw
Polychlorinated biphenyls in aquatic ecosystems
A series of laboratory and field investigations have been completed indicating that PCB stereochemistry has a strong influence on their uptake by aquatic organisms. Investigations into the kinetics of this process are continuing.

R.H. Coutts and Dr C. Catterall
Plant key
A key to the plants of the Brisbane region, suitable for use by amateurs, is being constructed.

P.E. Dale, Dr C. Hulsman, Dr B.H. Kay* and K. Ferguson*
Salt marsh ecology: Coomera Island
The project involves a multidisciplinary approach to the development of an understanding of a salt marsh ecosystem, which will be used to help produce an integrated programme of mosquito control.

Dr P.W.A. Dayananda
Drug addiction as a disease
This project involves the development of mathematical and statistical models of drug abuse and drug dependence in the analysis of illicit drug addiction.

Dr P.J. Doherty
Longitudinal comparisons of fish recruitment
Very young coral reef fishes were systematically collected from a large number of artificial "recruitment traps" placed on coral reefs at varying distances from the coastline off Townsville (latitude 19°S). The monitoring revealed a strong longitudinal effect on species composition. This means that populations of fishes on inshore and offshore coral reefs must be regarded as separate for management purposes.

Dr P.J. Doherty and Professor P.F. Sale*
Patterns of fish recruitment among reefs of the Capricornia Marine Park, Queensland
The densities, in similar habitats, of a wide range of recently-recruited coral reef fishes were counted on seven reefs from the Bunker-Capricorn group (latitude 23°S). This project is the first long-term monitoring programme of reef organisms in so many coral reefs in Australia. It has been instituted for the purpose of developing management strategies for the fishes of the Capricornia Marine Park.

R.J. Henry
Politics of appropriate technology
A review is being conducted of the conflict between the science establishment and critics in India since independence.
Science and technology infrastructural needs of selected south-east Asian countries
This project involves a review of the structural weaknesses of the science and technology infrastructures of five south-east Asian countries, and an appraisal of where Australian foreign aid could assist. It is being conducted for the Federal Department of Science and Technology.

Dr W.L. Hogarth and Dr P.M. Diamond* Interspecific competition in larvae between entomophagous parasitoids
Stability aspects of the interaction of two entomophagous parasitoids competing for the same host were investigated, together with changes in the population levels.

Dr W.L. Hogarth, Professor J-Y. Parlange and Dr R.D. Braddock Diffusivity of water from spherical cavities
An investigation of the diffusion of water from spherical cavities under steady state conditions, but with gravitational effects, is being carried out.

Dr J.M. Hughes Genetic differentiation between island populations of Littorina scabra and Bembicium nanum
Both species of snail under examination belong to the gastropod family Littorinidae. Bembicium nanum has a planktonic larva, whereas Littorina scabra does not. This project examines the hypothesis that, due to its limited dispersal ability, Littorina scabra should show much greater genetic differentiation between sub-populations. Twenty islands in Moreton Bay have been sampled, and genetic differentiation at five enzyme loci is being examined.

Natural selection in the mangrove snail, Littorina scabra
This project investigates the role of fish predators in the maintenance of the shell colour polymorphism in a population of Littorina scabra. The study has involved the restriction of predation on some trees. In addition, gut analyses are being carried out on the fish predators.

Dr J.M. Hughes and Dr M.P. Zalucki* The genetics of habitat selection in Danaus plexippus
This study investigates differences in gene frequencies between different habitat types. Forty populations have been sampled (ten of each of four different habitat types), and differentiation at four enzyme loci is being examined.

Dr C. Hulsman Survey of seabird colonies in the Capricornia section of the Great Barrier Reef Marine Park, Queensland
All seabird and wader populations in the Capricornia section of the park were censused. Their nesting habitats were described, and the reproductive output of each colony measured wherever possible. These data have provided the basis for developing management plans for seabird populations in the region.

Dr C. Hulsman, P.E. Dale, B. Jahke* and Dr M.B. Dale* Vegetation and nesting preferences of the Black Noddy
This project examined the distribution and abundance of vegetation on a coral cay, and the preferences that a specific type of bird exhibited for each habitat type at a macro and micro level. It was found that noddies preferred nesting in regenerating Pisonia forest which also contained stands of Ficus and Celtis.

T.J. Hundloe Economic evaluation of the northern prawn fishery
A comprehensive evaluation of the catching and processing sectors of the fishery is being conducted, together with an analysis of the effects of the shipbuilding subsidy. The project aims to produce recommendations for a new management programme.

The economic characteristics of fisheries in the Great Barrier Reef
This project involves the compilation of previous research on the economic characteristics of the Reef region fisheries and the preparation of a manuscript.

T. Hundloe, Dr S. Bandaranaike* and R. Neumann Consumption of seafoods in the Moreton region
A survey of approximately 1500 households in the Moreton region has been undertaken to determine seafood consumption patterns.

Dr R.L. Kitching Studies of animal movement
Simulation models of animal movement have been constructed and evaluated. Emphasis is on retaining generality, and animal species are chosen as appropriate to each level of model development. The simplest of models, of two-dimensional movement in an homogenous environment, used the intertidal snail Polinices incisus, as a source of parameter values and subsequent validation. Current work focusses on the more complex situation of two-dimensional movement in a heterogeneous environment and uses Iridomyrmex ants and ant-lions as experimental subjects.

Dr R.L. Kitching, Dr M. Bull*, Dr Y. Susuki*, Dr M. Zalucki*, Dr D. Mackay* and Dr Y. Tsubaki* Manipulative experiments on wanderer populations
Sex ratios in such populations of adult wanderer butterflies (Danaus plexippus) have been manipulated, and the effects on residence time of males and females within the sub-populations followed. This involved extensive mark-recapture programmes in four sites. Simply stated, the reduction in the
proportion of males within each sub-population lead to decreased residence time for females; a result in contrast with earlier work on winter populations.

Dr R.L. Kitching and Dr S.L. Pimm*

*Studies of tree-hole communities

Regular samples to estimate population sizes of the organisms occurring in water-filled tree-holes in sub-tropical rainforest have been taken from twelve sites over an eighteen-month period. Special attention has been paid to the populations of the beetle, *Prinocyphon* sp, and a chironomid, *Anatopynnia pennipes*. Subsequently, experiments designed to manipulate the size and predictability of the energetic input to the tree-hole community have been started. Results from these manipulations should allow differentiation between current, alternative theories of food-web dynamics.

Dr R.L. Kitching and Dr Y. Tsubaki*

*Central place foraging in larvae of the tailed emperor butterfly

A study of foraging and feeding of larvae of the butterfly *Palyura pyrrhus* was made. Basically, larvae of this species construct a leaf platform and return to it after each foraging bout. Travelling time to feeding locations increases as foliage close to the platform is consumed. Detailed behavioural studies using video techniques have been made, and evolutionary aspects of the phenomenon investigated.

W.J. Lawson and P.J. Stabler

*A study into the systematics and evolution of the genus batis

This study investigates the use of multi-dimensional scaling techniques and the unweighted pair-group method using mathematical averages (UPGMA) to understand phenetic relationships among forest-dwelling populations of the *genus batis*.

Dr M.J. Liddle and Dr A.M. Kay

*Tourist impact on reef corals

This project continues investigation into the effects caused by tourists trampling on coral reef flats in the Great Barrier Reef.

J. McColl-Kennedy

*Spatial and socio-economic variations in household electricity consumption

This project investigates the spatial variation of household electricity consumption across Brisbane, and endeavours to explain the observed patterns both at the suburb and household levels.

Dr G.T. McDonald

*Economic significance of Cooloola

This project involves an evaluation of the financial and economic impacts of tourism, recreation, forestry and mining in the Cooloola region of south-east Queensland.

Forestry in Australian land use planning

A review of policies and procedures for planning rural land in Australia is being conducted, with special reference to forestry.

D.J. Pitts, Dr G.T. McDonald and E.C. Stock

*Brisbane Conservation Atlas: Stage 1 project design

The investigators are designing appropriate information systems and urban management procedures for enhancing open space conservation and rehabilitation in Brisbane.

Dr G.H. McTainsh

*Beach profile and sediment changes along Pumicestone Passage, Bribie Island, Queensland

A long-term monitoring programme, involving beach profiling and sediment sampling, has been set up to investigate the effects of coastal engineering works upon the stability of beaches in this area.

Dr G.H. McTainsh and P. Hairsine

*Top-entry tube: a new method for measuring soil aggregate size

A sedimentation method is being developed for expressing soil aggregate size in terms of aggregate settling velocity, a parameter more appropriate for soil erosion studies.

Dr G.H. McTainsh and Dr P.G. Saffigna

*Spatial patterns of mangroves and terrestrial vegetation within Oyster Point Bay, Cleveland, Queensland

Aerial photos (1944 to 1983) are being used to monitor changes in the spatial pattern of mangroves within the Oyster Point Bay area. Ground survey methods are measuring the more recent expansion in terrestrial vegetation. These patterns are to be related to soil edaphic conditions, salinity, sediment supply and sea level change.

W.J. Metcalf

*A participant observation study of alternative lifestyle groups

In this project, some 100 groups have been visited for various periods of time over the past decade, with an ongoing involvement being maintained with about 12-15 groups. This is the largest longitudinal study ever done on such groups.

Content analysis of alternative lifestyle publications

Alternative lifestyle publications have been analysed, to reveal information about the movement itself.

I. Papcsik, M. Cramer* and S. Astill*

*Self-paced introductory mathematics using microcomputers

A unit of the Self-Paced Introductory Mathematics (SPIIM) component of the School’s Foundation Programme is being converted from textbook format to a microcomputer.
Adoption of pollution abatement technology by industry
This project examines the use of technical information at the community level concerning the development of a form of carbohydrates and amino acids which the larvae secrete from specialised glands. The role which amino acids may play in determining larval survivorship and adult food plant selection by Jalmenus evagoras is being investigated.

D.J. Pitts
Computer mapping of recreation opportunities
The solutions to complex problems of park management require information on both park resources and park visitors. This project is concerned with the development of a computer-based information system to assist in long-range planning and day-to-day management of the Brisbane Forest Park.

Opportunity shift: development and application of recreation opportunity spectrum concepts in park management
Increasing levels of use and pressures for development are changing the character of recreational opportunities available within many parks and reserves in Australia. This study investigated the causes and consequences of changing recreational use patterns in national parks in the central highlands of Queensland, and recommended new approaches to the management of outdoor recreation in national parks.

Dr R.E. Rickson
Adoption of pollution abatement technology by industry
This project investigates social and economic factors associated with pollution abatement change by industry.

Community responses to agricultural pollution
Soil erosion from farms is a principal cause of urban water pollution. This project compares farm and urban responses to management of the problem.

Information use at the community level
This project examines the use of technical information by community leaders.

Dr R.E. Rickson, P.J. Stabler and Dr P.J. Nowak*
Urban responses to agricultural pollution
Log-linear models were used to analyse data collected in the Fairmont region of the United States for a study into the relationships between rural and urban communities and the issue of urban water pollution from rural soil erosion.

Professor C.W. Rose and D.M. Freebairn*
Determination of field infiltration rate for rainfall and runoff measurements
An approximate analytic theory was developed, relating the rate of catchment runoff to excess rainfall rate. From measured runoff and rainfall rates, an infiltration rate could then be calculated from the difference between rainfall and excess rainfall rates. The method was applied to data collected by the State Department of Primary Industries in their experimental sites on the Darling Downs.

Dr P.G. Saffigna and Dr G.H. McTainsh
Limitations to crop productivity on soils subject to erosion
This project examines the extent to which removal of topsoil by erosion affects crop production on the black earths of the Darling Downs. A second objective is to identify which soil characteristics are most affected by erosion, in particular, soil nutrient status and available water capacity.

Dr R.W. Simpson (on secondment in 1983 to the Australian National University)
Hunter Valley environmental study
This study has been carried out by the Centre for Resource and Environmental Studies at the Australian National University, and consists of constructing air quality models for environmental impact assessment in the Hunter Valley region of New south Wales.

P.J. Stabler
The use of non-metric multi-dimensional scaling techniques to map environmental perception
Using repertory grid data multi-dimensional scaling techniques were used to uncover the dimensions that determine an individual’s perception of the environment.

J. Stokoe and Professor M.D. McGavin*
Genetic and environmental factors affecting eye cancer in cattle
This project examines the effects of various environmental and genetic conditions, together with the environmental genetic interactions, on the occurrence of cancer in the eyes and on the eyelids of Queensland cattle. A detailed study of the genetical process underlying the formation of eyelid pigmentation forms part of this study.

J. Stokoe and P. Thurbon* and I. Papacjsik
Quantifying lactation curves for Queensland dairy cattle
This project involves the application of various statistical techniques to the development of predictive functions for forecasting milk and milk component yields in dairy cattle. Such predictions will be used as a management tool for dairy farmers, and as an aid to dairy research and associated experimental design.

Dr P.D. Vowles and Dr D.W. Connell
Bioaccumulation patterns of alpha, beta, gamma and delta – hexachlorocyclohexane
The uptake and depuration of the four major isomers of hexachlorocyclohexane by freshwater fish is being examined. Bioaccumulation and uptake rates will be linked with stereochemistry, partition coefficients (octanol-water), and charcoal adsorption characteristics.

**Uptake of lindane by aquatic organisms**
A set of laboratory requirements into the influence of the stereochemistry of lindane and its isomers on their uptake by fish has been completed. Data analysis is now in progress.

Dr K.J. Walker  
*A note on “neo-Hobbesians”*  
A critique is being prepared of certain theories of political organisation under environmental constraint, which claim to follow Hobbes, but misread him in critical ways.

**Technology transfer to India: the case of Integral Coach Factory**
The project involves exploration of the problems of technology transfer in a specific case, and of major policy issues arising from it.

**The political theory of environmental constraint**
The project explores the postulation of conditions under which resources are not abundant. Because the natural environment imposes significant constraints on human activity, this has far-reaching consequences for political theory.

J.A. Ware  
*Tamborine Mountain community survey*  
This project involved the administering of a questionnaire to all residents of the Tamborine Mountain area of south-east Queensland to determine their attitudes to future development alternatives for Tamborine Mountain. The findings were presented in a report to the Beaudesert Shire Council which forwarded it to their town planning consultants who were preparing a development control plan for Tamborine Mountain.

**Postgraduate Students**

Dr U. Achmadi (PhD) – *The strategy of the use of insecticides in the agricultural sector with reference to the health aspect of farmers in Indonesia*

P.G. Allsopp (PhD) – *Biology and population ecology of three species of Tenebrionidae (false wire worms)*

R.D. Armstrong (PhD) – *Analyses of environmental factors in relation to competition between Aristida and preferred range grasses*

Dr J. Banks (PhD) – *Overview of current adolescent primary care*

D.A. Barry (PhD) – *Mechanics of solute and water movement in soil*

E. Basuno (MPhil) – *Human ecology and land use*

P.J. Boon (PhD) – *Nitrogen cycling and seagrass ecosystems*

M. Burke (PhD) – *The role of affective education in the training of technical and further education beginning teachers*

J. Camilleri (PhD) – *Ecological theory*

S.Y. Campbell (PhD) – *Investigation and analysis of surface water flow*

J.F. Clewett (PhD) – *Use of shallow storage irrigation dams in northwest Queensland*

A.L. Cogle (PhD) – *Fertilizer nitrogen transformations*

A.S. Collings (PhD) – *Environmental hydrology*

M. Cullen (MPhil) – *Deposition and pedogensis of a prograding coastal strand plain on North Stradbroke Island*

P. Doolibi (PhD) – *Mathematics*

R. Douglas (MPhil) – *Health ecology*

T.R. Earle (PhD) – *Man-land analysis: some methodological problems in evaluating the Darling Downs soil conservation programme*

K. Engkus (MPhil) – *Tropical public health*

M. English (PhD) – *Nitrogen fixation and nitrogen budget in legume/cereal rotation*

M.P. Ferrier (PhD) – *Social planning*

J.F. Fleming (PhD) – *The study of rainfall and irrigation effects on the moisture status of soils*

R.B. Floyd (PhD) – *Population ecology*

R.T. Gilmore (PhD) – *Urban land use*

D. Girle (PhD) – *Investigation of the way in which health services, particularly in the area of 'mental health', are delivered in Queensland*

D.L. Grantham (MPhil) – *A study of dust exposure in relation to pneumoconiosis in the Queensland coal mining industry*

Dr D.A. Gray (PhD) – *The relationship of vital lung capacity to heart disease and longevity*

P. Hairsine (PhD) – *Role perceptions and the ward sister*

C.J. Hill (PhD) – *The effect of adult food resources on the species and abundance of butterflies*
S. Howden (PhD) – Autecology of Bothriochloa pertusa
T.J. Hundloe (PhD) – Economics and management of the Queensland fishery resource
C.J. Jackson (MPhil) – Prawn studies
K. Jackson (MPhil) – Adaption of guar (Cyamopsis tetragonoloba (L) taub) in relation to the management of cracking clay soils in central Queensland
S. Jazrawi (PhD) – Soil pollution
D. Jones (PhD) – The Australian bush-turkey, Alectura lathami
N. Keys (MPhil) – Tourism impacts: a case study
I.S. Kikula (PhD) – Fluid flow in porous media
W.J. Lawson (PhD) – A genus of African fly-catchers (birds) called batis, which consists of seventeen species
D.A. Lockington (PhD) – Fluid flow in porous media
H. Lombert (PhD) – The co-evolution of bird species and their parasitic acaro fauna
C. Lovell (PhD) – Soil erosion and deposition processors
K. Lyonns (PhD) – Population studies of butterflies
W.J. Metcalf (PhD) – The “back to earth” movement as a social and political movement
G.J. Miller (PhD) – Bioaccumulation of lipophilic compounds (xenobiotics)
C.J. Milligan (PhD) – Estuarine fauna as water quality indicators
A. Mitchell (PhD) – Distribution and dispersal of fish larvae across the Great Barrier Reef shelf
G.C. Ng (PhD) – The environmental and social impacts of land development in the Jengka Region, Malaysia
I. Oliver (PhD) – A study of psychological and sociological factors in systems analysis and design
A.G. Orr (PhD) – Studies on the reproductive history of insects as a comparison of three species of butterfly.
I. Papacjsik (PhD) – Determining optimal lactation curves for Queensland cows
D. Parsons (MPhil) – Instrumentation system for flood flow analysis
T.L. Piggot (PhD) – Hydraulic geometry of river channels
R. Pitcher (PhD) – Subtidal marine research
D.J. Pitts (PhD) – Recreation planning models based on carrying capacity concepts
B.Q. Pope (PhD) – Mathematical biology
R. Rankin (PhD) – Scientific concept and acquisition through visual means
L. Salisbury (MPhil) – Captive breeding of endangered parrots for reintroduction
G.C. Sander (PhD) – Soil water infiltration
E. Scheermeyer (PhD) – An investigation of hibernation of Australian danaid butterflies in the Australian tropics
G.R. Shaw (MPhil) – A study in the behaviour of polychlorinated biphenyls in estuarine food webs
D.G. Skinner (PhD) – Behaviour of polychlorinated biphenyls in estuarine food webs
G. Smith (PhD) – Aspects of breeding and feeding biology of sea-birds on the Great Barrier Reef
R.J. Smith (PhD) – Hydraulics of flood flow through strip cropping
F. Stagnitti (PhD) – Prediction of catchment response to a storm based on soil property principles
J.C. Stevenson (MPhil) – The effectiveness of different models of curriculum development in technical and further education
B.J. Stewart (PhD) – Environmental aspects of water resources management in Australia
E.C. Stock (PhD) – Planning of canal estates in Queensland
S. Sulaiman (PhD) – The effects of pollutants of fish
P.G. Surman (PhD) – Statistical modelling of air pollution
R. Taplin (PhD) – The politics of forest policy in the case of Terania Creek, New South Wales
Dr R.P. Taylor (PhD) – The subjective and objective criteria and judgement-making in general practice
P. Tighe (PhD) – The politics of environmental protection in a resource development state
W.D. Weeks (PhD) – Mathematical modelling of hydrologic processes
R.M. Whalley (MPhil) – Soil erosion

P.J. White (PhD) – Crop residues

M.J. Williams (MPhil) – Aboriginal studies

A.D. Wright (MPhil) – Role of the moth Sameodes albignutalis (Warren) in biological control of water hyacinth

J.M. Zalucki (MPhil) – Pollination ecology

1983 RESEARCH AWARDS

Australian-American Educational Foundation (Fulbright Program)

Dr N.E. Pierce – $24,000
The ecology and evolution of symbioses between lycanid butterflies and ants

Australian Conservation Foundation

Institute of Applied Social Research (T.J. Hundloie) – $4,805
Alternate job opportunities in the forest industry

Dr G.T. McDonald – $7,900
Economic significance of Cooloolo

Australian Institute of Marine Sciences

Dr P.G. Saffigna – $1,500
Cycling of nitrogen in marine systems

Australian National Parks and Wildlife Service

Dr A.H. Arthington – $12,138
Ecology of native and introduced fish

Australian Research Grants Scheme

Dr W.C. Boughton and Dr R.J. Neller – $4,100
Modelling urban stream channel changes

Dr E.K. Christie – $11,264
High temperature stress in semiarid grasses

Dr R.L. Kitching – $9,400
Animal movement studies at the individual and population level

Dr R.E. Rickson – $11,550
Adoption of soil conservation technology by farmers

Australian Wool Corporation

R.D. Armstrong – $902 (Travel grant) and $8,330 (Research Grant)
Analyses of environmental factors in relation to competition between aristida and preferred range grasses

Dr E.K. Christie – $16,670 (for year 1982/83)
Environmental factors and competitive ability in semiarid forage plants

Dr E.K. Christie – $13,410 (for year 1983/84)
Analyses of environmental factors in relation to competition between rangeland forage grasses

Brisbane City Council

Institute of Applied Social Research (D.J. Pitts, Dr G.T. McDonald and E.C. Stock) – $11,000
Project design of the Brisbane Conservation Atlas

Brisbane Forest Park Administration Authority

D.J. Pitts – $500
Computer mapping of recreation opportunities

Commonwealth Department of Health

Professor A.A. Brownlea – $9,000
Alternative health care

Consolidated Fertilizers Ltd

Dr P.G. Saffigna and Dr W.M. Strong* – $27,800
Retention and crop utilization of fertilizer nitrogen

Department of Primary Industry (Commonwealth Special Research Grant)

Dr P.G. Saffigna and Dr G.T. McTainsh – $6,900
Soil erosion and crop production

Department of Science and Environment

Dr D.W. Connell and G.J. Miller – $23,046
Behaviour of lipophilic substances in marine ecosystems

Ecological Society of Australia

A. Smyth – $450 (Travel grant)
Foraging strategies of silvereyes

Federation of Australian University Staff Associations

Institute of Applied Social Research (S. Payne) – $27,837
Allocation of resources in the University sector

Fishing Industry Research Trust Account

T.J. Hundloe and Dr. S. Bandaranaike* – $18,328
Fish and seafood consumption in the Moreton Region – $12,794
Consumption patterns of fish and shellfish in the Moreton Region – $5,534

Gold Coast City Council

Dr C. Hulsman, P.E.R. Dale, Dr B.H. Kay* and K. Ferguson* – $2,000
Saltmarsh ecology and mosquito control – Coomera Island
Great Barrier Reef Marine Park Authority

Dr C. Hulsman – $10,411 (for year 1982/83); $13,940 (for year 1983/84)
Survey of seabird colonies in the Capricomia section of the Great Barrier Reef Marine Park

T.J. Hundloe – $5,000
Preparation of a manuscript on the economic characteristics of fisheries in the Great Barrier Reef

Dr M.J. Liddle and Dr A.M. Kay – $59,849
Tourist impact on reef corals

Dr R.L. Kitching – $200
Animal movement studies at the individual and population level

Dr R.E. Rickson – $125
Adoption of soil conservation technology by farmers

VAX Management Committee – $1,000
Access to the VAX Research Facility for trial usage

University Research Grant

Dr A.H. Arthington – $4,848
Effects of pollution on stream drift

Dr C. Catterall and Dr I. Poiner – $4,526
Exploitation and population parameters of an edible seasnail

P.E.R. Dale, Dr C. Hulsman, Dr B.H. Kay* and K. Ferguson* – $3,100
Saltmarsh ecology and mosquito control – Coomera Island

Dr W.L. Hogarth – $2,500
Tables for the determination of soil-water diffusivity in the field

Dr J.M. Hughes – $4,700
Genetic differentiation between island populations of Littorina scabra and Bembicium nanum

T.J. Hundloe and S.M. Driml – $1,346
Recreational fishing in Queensland

W.J. Metcalf – $5,000
Content analysis of alternative lifestyle publications

Dr B.S. Niven – $4,000
Formalization of theory of animal ecology

Professor J-Y. Parlange and Dr R.D. Braddock – $1,000
Modelling water table fluctuations in unconfined aquifers

Dr K.J. Walker – $3,000
The political theory of environmental constraint

United States/Australia Co-operative Science

Dr R.L. Kitching and Professor S.L. Pimm* – $22,000
Dynamics of tree-hole communities

Wheat Industry Research Council

Dr P.G. Saffigna – $41,675 (Research grant 1982/83) and $4,600 (Travel Grant)
Nitrogen fertilizer availability to wheat under field conditions

Dr P.G. Saffigna – $31,504 (Research grant 1983/84)
Nitrogen fertilizer availability to wheat under field conditions

PUBLICATIONS

Books


Chapters in Books


Journal Articles


CHRISTIE, E.K. and HUGHES, P.G.* "Interrelationships between net primary production, ground-storey condition and livestock carrying capacity of the Acacia aneura grazing lands of semiarid Australia". Agricultural Systems 12, 1983.


DOHERTY, P.J. "Tropical territorial damselfishes: is density limited by aggression or recruitment?". Ecology 64: 176-190, 1983.


HUGHES, P.G.* and CHRISTIE, E.K. "Ecosystem processes in semiarid grasslands. III. A simulation model for net primary production".


NIVEN, B.S. “Two different animals may not have the same environment”. Journal of Theoretical Biology 105: 369-370, 1983.


Conference Papers and Proceedings


CHRISTIE, E.K. “Ecological research needs in semiarid rangeland management: the Acacia aneura woodlands of semiarid Australia as a case study”. Annals Brazilian Symposium on Semiarid Tropics 1, 1983.


PIERCE, N.E. “Associations between lycaenid butterflies and ants”. Paper presented to a meeting of the Queensland Entomological Society, University of Queensland, Brisbane, 1983.


WEBB, L.J. “Forest ecology and community interests”. Paper presented to an executive seminar in the CSIRO’s Division of Forest Research, Canberra, 1983.


Reports and Other Publications


NIVEN, B.S. "The precise environment of some well-known animals: XXVI. The brachiopod (Lingula anatina)". AES Working Paper 16/83, Brisbane, Griffith University, 1983.


NIVEN, B.S. and STEWART, M.G. "The precise environment of some well-known animals: XIII. The sheep blowfly (Lucilia cuprina)". AES Working Paper 1/83, Brisbane, Griffith University, 1983.

NIVEN, B.S. and STEWART, M.G. "The precise environment of some well-known animals: XVI. The earthworm (Lumbricus terrestris)". AES Working Paper 2/83, Brisbane, Griffith University, 1983.


NIVEN, B.S. and STEWART, M.G. "The precise environment of some well-known animals: XXIV. The rate tapeworm (Hymenolepis diminuta)". AES Working Paper 7/83, Brisbane, Griffith University, 1983.

NIVEN, B.S. and STEWART, M.G. "The precise environment of some well-known animals: XXV. The fresh-water sponge (Spongilla lacustris)". AES Working Paper 10/83, Brisbane, Griffith University, 1983.

RICKSON, R.E. "Community interdependence and environmental quality". Brisbane, Institute of Applied Social Research, Griffith University, 1983.

RICKSON, R.E. "Government regulated and industry pollution abatement change". Brisbane, Institute of Applied Social Research, Griffith University, 1983.


STOKOE, J., WILLIAMS, P.* and LITTLE, G.* "Computers in education – an orientation program". Brisbane, Griffith University and Department of Education (Brisbane South Region), 1983.


* In listing publications where a Griffith University staff or student member is one of a number of contributors the name of the contributor(s) external to the University is indicated by an asterisk.
SCHOOL OF HUMANITIES

Staff in the School of Humanities were involved in research projects covering a range of areas of study:

- the politics and economics of social class;
- the study of Australian documentary films since World War II;
- the role of the short story in Commonwealth literature; and,
- the politics and rhetoric of scientific method.

The School's research funds in 1983 amounted to $28,000 and a further $18,500 was available for staff attendance at conferences. In addition, the School attracted a total of $18,800 from external granting bodies. Of this $15,800 was awarded by the Australian Research Grants Scheme for the project:

- Dr M. Alexander and Dr. J. Walter
  "A comparative study of the cosmopolitan and local orientations of Australian businessmen in Queensland and Victoria".

The School also received a total of $8,050 from the University Research Committee in support of the projects:

- Dr M. Lisle-Williams
  "Family, class and corporation in the financial system";
- A. Moran
  "The projection of Australia - Film Australia 1945-1980".

Ms Sylvia Lawson, Lecturer in the School of Humanities, won the 1983 Wilke Literary Award for her highly acclaimed book "The Archibald Paradox". The book was also highly commended by representatives of the Victorian Fellowships of Australian Writers at the judging of the Con Weickhardt Biography Award.

Institute for Modern Biography

The international visitor to the Institute for Modern Biography (IMB) in 1983 was the distinguished American biographer, Justin Kaplan. Justin Kaplan won the Pulitzer Prize for biography with his work on Mark Twain (Mr Clemens and Mark Twain), and has written highly acclaimed biographies of Lincoln Steffens and Walt Whitman. He is currently working on a biography of Charlie Chaplin.

Justin Kaplan spent April at the Institute, and gave lectures and seminars on various aspects of literary biography with particular reference to Mark Twain and Walt Whitman, and on the problems of writing biography when speaking of Charlie Chaplin.

A highlight of Justin Kaplan’s visit was a well-attended and successful weekend workshop on biography, open to the general public. The workshop, featuring sessions by Justin Kaplan on the nature of literary biography, also included sessions on profile writing in journalism and social commentary (Craig McGregor); a discussion on biography and autobiography relating to Virginia Woolf (John Mepham); and a look at the methods of biographical research (James Walter).

While in Australia, Justin Kaplan also gave papers at the University of Sydney, and at the annual conference of the Melbourne Psychosocial Studies Group at Lorne, Victoria. The Institute records thanks to Justin Kaplan for his contribution to the life of the Institute, and is pleased to have hosted such a productive visit.

Papers given in the IMB seminar series during the first half of 1983 included the work of postgraduate students in biography. Mavis Rose, who is studying the Indonesian political figure, Mohammad Hatta, spoke on "Cross cultural study and biography". Mary Power, who is writing a study of a highly achieving Australian family, looked into the social history of this family to ask the wider question, "When did they start calling Australia home?".

Work is nearing a close on the pre-publication preparation of the manuscript of the biography of Sir Samuel Griffith by Professor Roger Joyce. The projected publication date by the University of Queensland Press is October 1984. Other projects upon which work is proceeding within the Institute include an anthology on Australian intellectuals and intellectual movements, to be edited by Brian Head and James Walter, and published by Oxford University Press, and a collection of papers on the process of writing biography, edited by James Walter and Raija Nugent.

The first issue of the IMB Newsletter for 1983 was published in July and the final issue will be out in November. The Newsletter has continued to generate considerable interest outside the University, and has been successful in attracting books for review.

RESEARCH PROJECTS AND ACTITIES

Staff

Dr M.L. Alexander
Semi-industrialism, bureaucratic-authoritarianism and corporatism: Argentina, Australia and Canada in the postwar era

This project constitutes a major reworking of the techniques and approaches for comparing the postwar history of these three countries. The study forms the basis of a journal article containing the main lines of argument which will be expanded into a book-length study.
Structural inequality in the modern world system
Use of cross-national comparative methods to assess the impact of the world economy on specific countries by analysing structural distortions associated with world economy participation. The project involves the collection of data on the sectoral distribution of income and the labour force.

Australian business leaders
A series of interviews with Victorian and Queensland businessmen dealing with their attitudes to development, foreign investment and federal-state relations. The project also probes the sources of their career success and networks of influence within the business community.

Dr P.J. Buckridge
Dependency theory and Australian literature
Research for a chapter in a forthcoming book: 'Dependency in Australian education'.

Ideology and literary form
A study of the relationship between ideology and literary form.

Dr M.C. Bulbeck
History of the Australian state
A study of the interplay of changes in the economy, class formation and the Australian state with particular reference to the development of tariff policies.

Technological change and its impact on women's jobs
An historical and contemporary analysis of the relationship between technological change, union strategies against job loss and the general level of employment as they affect the displacement or relocation of women in the areas affected by technological change.

Living and working in the Pilbara
An oral history of a Pilbara trade unionist supplemented by analysis of secondary materials and statistics to analyse the relationship between union activity and social life in the isolated mining towns of the Pilbara.

Professor H.P. Caton
The politics of progress
A study of the character, diffusion and implementation of the programme of progress from 1600 to 1900.

Political ethology
The social technology model of political organization and the behavioral psychology of legitimating rhetorics.

Dr S.R. Clegg
Class and stratification in Australian society
This project is part of a major cross national analysis of class structure in major advanced industrial societies. The study is not only a "descriptive" analysis of class structure but also a study of the effects of class structure on factors such as participation in civil society, ideology and work discipline. This is a joint study, undertaken with Professor J.S. Western of the University of Queensland.

M.S. Counihan
The 'audience' in media studies
A series of theoretical-historical investigations into how movie-goers and broadcast listeners have been constituted as 'audiences' in the discourses of moral regulation, mass culture criticism, and empirical social science.

The formation of a commercial broadcasting system
A history of the transformation undergone by Australian radio during its first two decades, focussing on the development of 'modern' (advertising-based) commercial broadcasting.

Dr J.A.S. Craik
Study of tourism and the Great Barrier Reef
The development of tourism and debates over preservation of the reef.

S. Crofts
"The Dismissal": television and politics
This study analyses the mini-series' representation of political events and processes. Of particular concern is the moulding of politics into the grid of individualist characterisation and a closed narrative structure.

Film in the USSR and Germany in 1917-34
The topic examines the different texts and contexts of political cinema in the world's two most radical post-World War I cultures.

Dr C.G. Crisp
The evolution of technical codes in realist cinema
This project aims to chronicle and interpret the standard technical practices of French cinema, after the introduction of sound. Beginning with editing practices, it will extend to an analysis of the punctuation code and syntagmatic groupings, the musical code and camera codes. The project aims to investigate the construction of "subjectivity" in cinema, to describe what constituted "realism" in French cinema of the thirties and to relate these various practices to their institutional, socio-political and ideological contexts.

Eric Rohmer, realist and moralist
An analysis of the tension between the realist film-making practices of Eric Rohmer and the austere Catholic values which generate them and yet also frequently contradict and subvert them.
S.D. Cunningham

An uncertain stability: Australian cinema 1930-1946
A study of the Australian film industry from the coming of sound to World War II.

J.D. Dawson

The projection of Australia
This is a joint programme undertaken with A. Moran, which analyses Australian documentary film since World War II, focussing on the work of the Commonwealth Film Unit (now Film Australia).

Australian mythologies
An examination of the mythologies that form the 'Australian way of life' involving an analysis of the representation of Australia through advertising images as well as literature and popular cultural material.

Urban aesthetics
A long essay on post-war architectural aesthetics: theory, practice and the mixed discourses of 'art' and the practical.

The writer and the film
A long essay in "Page to stage" (Editions Rodopi, Amsterdam) on the role of the screenwriter in fictional films.

G. Dow

Economic policy and the state: the regeneration of class politics
A theoretical and empirical examination of 'Keynesian' and 'monetarist' economic policies. The project examines state interventions and state responses to the economic crises that have emerged since the onset of recession in 1974. Case study material from the United Kingdom, Sweden, and Australia is used to 'test' theories of the state and theories of economic crisis. An evaluation of new political institutions in each of the three countries is included. The concept of "democratic class struggle" is developed.

Economic policies of the 'new right'
An examination of the economic policies of the 'new right' in Australia and the UK - with special reference to their arguments concerning the causes of inflation.

Alternative economic policies
An examination of the development of 'alternative economic policies' and 'alternative accumulation strategies' for Australia. A project designed to provide information for political parties in Australia.

Dr R.A.E. Fitzgerald

A general history of Queensland
A continuation of research into the general social, political and cultural history of Queensland from earliest times to the present. Vol. 2 from 1915 to the early 1980s will be published by University of Queensland Press in 1984.

Carl Jung and political theory
A research project dealing with the ideas of Carl Jung as they relate to political theory and individual, group and collective political behaviour.

Dr D. Freundlieb

Hermeneutics and semantics
An attempt to reconstruct the notion of 'natural concept formation' and 'application' in Gadamer's philosophical hermeneutics from the point of view of modern semantics.

The philosophy of literary studies: a radical alternative
This study is a critical discussion of contemporary literary theory. The second part presents a new philosophy of literary studies drawing on recent developments in semantics and discourse analysis.

S.R. Garton

Insanity in NSW: some aspects of social history 1878-1958
Research for completion of a PhD on this topic at the University of New South Wales.

Dr B.W. Head

The politics of economic development in the Australian states
A comparison of development strategies and government assistance in the various states and territories, with emphasis on the uneven development and the sectoral imbalances of regions.

State and economy in Australia
A study of relationships between the public and private sectors, with emphasis on the roles of capital, labour, and state agencies in the making of economic policies.

Intellectuals in Australia
A project undertaken with Dr J. Walter which studies different groups of intellectuals and their cultural, social and political ideas.

Politics, ideology and social science in France 1770-1815
An historical study of the origins of the policy sciences in France, and their connections with liberal social philosophy.

Power in Australia
A general survey of theories and data on the main structures of economic, political and cultural power.

I.R. Hunter, Dr G.D. Saunders and D.G. Williamson

A case study of the trial of 'Lady Chatterley's Lover'
A study of the relation between practices of reading employed in legal institutions and the
The projection of Australia
A study of Australian documentary film in the period 1945 to 1980.

Dr J.W. Oppel

Florentine humanists and the civic life 1380-1435
The activity of a group of Florence's writers in rationalising the activities of the Florentines in relation to three major dimensions of civic life - the family, the economy, and the state - and in educating a lay spiritual elite. A comparison of two figures - Leonardo Bruni and Leon Battiste Alberti - with regard to their attitude towards the civic life.

Professor C.F. Presley

The place of pictures
Continuing research for a book on the place of pictures in semiotics and semiology, which will examine the possibility of less formal discussions of meaning and significance.

Dr S.T. Rickson

The position of rural women in industrial society: a US/Australia comparison
Rural women seem to occupy a little known or understood position within industrial society. As a group they fail to 'fit' into some of the theoretical models of women's place in industrialized society; yet they have an undoubted social and economic impact on many aspects of that society. This study involves the collation of material to form a working bibliography for use as a source for future research.

Women and ageing
This project concerns the changing roles, identities and support systems confronting women in the ageing process. It investigates the possibility of developing adequate self definitions to cope with changing circumstances and social support.

Dr L. Ryan

Where everyone was in Australia: 1838
The Tasmanian Aborigines in 1788
Inmates and institutions 1939-1981
Research on the above topics for inclusion as chapters in the Bicentennial history of Australia.

Aboriginal policy in Queensland
A chapter on this topic for inclusion in the book Queensland politics 1968-1982 edited by Margaret Cribb and Allan Patience.

Dr G.D. Saunders

Authorship and copyright
A comparative historical and discursive study of two key concepts in the area of claims of ownership of texts and supposed associated rights.

Dr J.A. Walter

Advisers and policy-making: non-elected political leadership
A study of the influence of personal advisors over elected officials in the higher strata of Australian government.

Biographers at work
An anthology of essays by biographers talking about their craft.

Cosmopolitan and local orientations of Queensland business elites
A study of whether local loyalties affect business career paths and decision-making. A joint project with Dr Malcolm Alexander.

Dr G.L. Whitlock
Women writers
A study of Doris Lessing’s Children of violence series, as part of an anthology of Lessing criticism.

An analysis of Radclyff Hall and the reception of The well of loneliness. A project undertaken with Dr Beverley Brown.

Angry women
Research for a chapter on humour in feminist fiction for inclusion in the anthology.

Dr R.R. Yeo
Topics in the cultural and intellectual history of science
Topics being studied include science and intellectual authority; historiography of scientific method; and science and technology in British encyclopaedias.

Postgraduate Students

D. Barry (MPhil) – The work of Michel Foucault

L. Boccabella (MPhil) – The relationship between Australian media corporations and the government

M. Brown (MPhil) – Some questions on common-sense, self-evidence and the use of examples

T. Cochrane (MPhil) – The consequences for Queensland of the failure of the government to obtain finance from the London money market 1920-24: an investigation

D. Cryle (PhD) – The press in colonial Queensland, 1846-76

A. Cunningham (MPhil) – The making and perception of pictures by children in relation to language acquisition with particular reference to concept formation

M. Curry (MPhil) – A history of Australian biography

T. Dobson (MPhil) – Abstract cinema: Richter and McLaren

G. Dow (PhD) – The transmission of ideology: economic policy and the state

W. Doyle (MPhil) – Pluralism in the media in Italy and Australia

A. Evans (MPhil) – Educational provisions for the severely mentally handicapped: a comparative study of Australia and China

M. George (MPhil) – Discussion of various contemporary issues and problems which call into question the conceptual category, ‘economic enterprise’

H. Gill (PhD) – Pastoral labour and the state

J. Gow (PhD) – Capitalism as a world system

V. Griffin (MPhil) – The valorization process within Australian capitalism 1970-1980

I. Hunter (MPhil) – Linguistics and the order of language

B. Molloy (PhD) – Before the interval – recurrent themes and stereotypes in Australian feature films, 1930-1960

T. O’Reagan (MPhil) – The politics of representation

R. Patterson (PhD) – Ethnic broadcasting

M. Power (PhD) – A psycho-biographical study of an Australian family

B. Shaw (PhD) – A biography of Michael Somare, ex Chief Minister and Prime Minister of Papua New Guinea

L. Stanford (PhD) – Development of Australian attitudes to the handicapped

J. Wang (MPhil) – Henry Green and English modernism

P. Williams (PhD) – Society and literature: the work of Frank Hardy

1983 RESEARCH AWARDS

Australian Research Grants Scheme
Dr M.L. Alexander and Dr J.A. Walter – $15,800
A comparative study of the cosmopolitan and local orientations of Australian businessmen in Queensland and Victoria

Canadian Government – Faculty Enrichment Award
Dr G.L. Whitlock – $5,000
Utah Foundation
Institute for Modern Biography – $3,000
A biography of Sir Samuel Walker Griffith

University Research Grant
Dr M.C. Lisle-Williams – $5,650
Family, class and corporation in the financial system
A.J. Moran – $2,400
The projection of Australia – Film Australia 1945-1980

PUBLICATIONS

Books

Chapters in Books


Journal Articles


LAWSON, S.G. "Truth to tell". Filmnews April-May: 11, 1983.

MORAN, A.J. "Australian documentary cinema". Arena 64, August, 1983.


ZURBRUGG, N.C.P. ". "The voice of Barthes' and the possibilities of sound poetry". Island (ANZART Supplement) 16, Spring, 1983.


Conference Papers and Proceedings


Reports and Other Publications

CATON, H.P. "Ethics and sociohistory" a review of "Morality as a biological phenomenon". Quadrant 27: 84, November, 1983.


WALTER, J.A. "George Orwell" by B. Crick, and "Flaws in the glass" by P.White,(reviews). Institute for Modern Biography Newsletter, 1983.

WHITLOCK, G.L. (reviews) Institute for Modern Biography Newsletter, ANZACS Newsletter and CRNLE Reviews Journal.


* In listing projects or publications where a Griffith University staff or student member is one of a number of contributors, the name of any contributor external to the University is indicated by an asterisk.
SCHOOL OF MODERN ASIAN STUDIES

Research conducted by staff and postgraduate students during the year was diverse, and concerned historical, political, economic and social aspects of Asia in general, and of China, Japan, Indonesia, Malaysia, Vietnam and Korea in particular. Some major research concerned with Australia-Asia relations was completed in 1983 and a series of projects around the theme of Australian relations with Korea began. In addition, research was carried out on the integration of the international economy, with focus on Australia.

Research on China during the year encompassed a wide range of enquiries into the complexities of the traditional and modern periods. It included: the analysis of modern literature; traditional and contemporary performing arts; the examination of social organisation, population problems, the economy, poverty, the link between power and policy, and the issue of centralism versus regionalism especially the role of the minority nationalities; education and foreign policy in Nationalist China; Sino-British relations; and Marxist thought in the twentieth century.

In 1983 research on Japan focussed on the country's political, economic and social structure during the twentieth century and on the structure and characteristics of contemporary Japanese society. Work was undertaken on the organisation and activities of Japanese companies, the modern Japanese political economy and its place in the world economic order, international relations and trade, income distribution and wage differentials, pre-war literature, the images of Japan projected in Australia and vice versa, and Australia's place in Japan's comprehensive security policy.

There are three constellations of research on Indonesia and the Malay World: aspects of socio-cultural complexity and change; the problems of developing countries; and the relationships between the countries of Southeast Asia. In particular, research focussed on the economies of the ASEAN countries, religious reform and the critical place of religion in local life, the position and role of the overseas Chinese, and social and economic change in colonial Southeast Asia.

The Centre for the Study of Australia-Asia Relations

The Centre for the Study of Australia-Asia Relations (CSAAR) was set up in the School of Modern Asian Studies in September 1978. Its functions are to carry out research on the problems in Australia's political, economic and cultural relations with Asian countries. The Centre is administered by a Management Committee chaired by the Chairman of the School, and has among its membership, faculty from the School of Modern Asian Studies and the School of Australian Environmental Studies. The Deputy Chancellor, Sir Allan Sewell, is also a member of the Committee.

RESEARCH PROJECTS AND ACTIVITIES

Staff

Dr P. Arudsothy  
**Industrial relations in ASEAN countries**  
The study focusses on the impact of recent rapid growth of the economies of the Southeast Asian nations on the labour sector. In particular, it is an examination of the implications of the 'export-led strategy' of economic development in these countries for trade unions and the evolving pattern of industrial relations. The research covers the legal, political, social and economic environments in which workers in the modern sector have been organised and the role trade unions have played in seeking improved wages and working conditions.

Dr R. Atsumi  
**Friendship in a cross-cultural perspective**  
A cross-cultural analysis of the meanings and functions of 'friendship' vis-a-vis other sociable personal relationships such as obligatory personal relationships (tsukiai in Japanese) and kinship based relationships.

**Roles and relationships of Japanese women**  
A study of the position and roles of Japanese women and their personal relationships through an analysis of the patterns of the division of labour and activities and their relationships with their husbands, relatives and friends.

M.B. Bocquet-Siek  
**Social and cultural change among Peranakan Chinese in colonial Java**  
This project aims to develop an understanding of the impact of Western education on the social, cultural and political life of the Peranakan Chinese in Java in the first half of the twentieth century and the changes this impact brought about on their cultural, social and political outlook.

**Dutch East Indies society as reflected in its literature**  
This is a comparative study of Indies colonial society as described in Dutch, Peranakan Chinese and Indonesian popular literature of the first half of the twentieth century. The study aims at drawing a more complete picture of social relationships among the Indonesian, Peranakan Chinese and Dutch population groups in colonial Indonesia.
This study explores the experiences of the various minority nationalities under Chinese socialism.

B. Dawson
Taiwanese fishing activities in Australian waters
The primary goal of this project is to write a history of the illegal clam boat activity in Australian waters. It involves extensive interviewing of fisheries officials, fishermen, charter boat operators and others. It is an important topic for its impact on Australia’s relations with one part of Asia.

Dr R.E. Elson
A history of the cultivation system in Java, 1830-70
The aim of this project is to assess the social impact on the peasant population of Java of the system of forced cultivation introduced by the Dutch colonial government in 1830. This required that peasants cultivate tropical export crops and deliver them to the government at low, fixed prices. The operation of the system brought substantial changes in the social and economic fabric of rural life in Java in the nineteenth century. This research is intended to examine them in detail and appraise their significance.

Dr E.S.K. Fung
Sino-British relations, 1927-31
This is a book-length study of the Anglo-Chinese rapprochement in the first years of the Nationalist government in Nanking, with special reference to the Chinese attempts at treaty revision and Britain’s response to them.

Nationalist foreign policy in the Nanjing decade
This is a study of the role of ideology in Chinese Nationalist foreign policy, paying special attention to the issue of anti-imperialism within the Nationalist Party and the interaction of external relations and domestic politics.

Editing a book on China in transformation 1860-1949
This large volume revolves around the theme of myth and reality in China’s struggle to modernize since the Opium Wars. It covers a diversity of topics, ranging from reformist thoughts to the changing role of women to the ultimate success of the Chinese Communist Party in the civil war of 1946-49.

Dr E.S.K. Fung and Professor C.P. Mackerras
Australia-China relations since 1966
The project was arranged by the Centre for the Study of Australia-Asia Relations within the School. It aims to investigate the development of Australia’s relations with China since Menzies’s resignation as Prime Minister at the beginning of 1966. It seeks to explain changes in the relationship by reference to the social and political conditions of each country. It covers various aspects of the relationship and comes as close as possible to the present at the time.
of publication. The research and writing were completed in 1983.

Professor P.Y. Ho
*The development of science in China*
An examination of scientific biographies and the study of long lost Chinese scientific and technological writings.

Dr J.D. Howell
*Contemporary Javanese mysticism*
A project concerned with contemporary changes in discourse and organization of Javanist mysticism in the Surakarta area. These changes in religious life are seen in the context of changing social and economic organization in Java and also in the context of negotiations with the national government over the legal and political status of mystical groups.

*Hindu and Buddhist reform movements in Indonesia*
The project monitors recent developments in the Hindu and Buddhist reform movements as carried forward by a variety of Javanese- and Balinese-centered organizations. The relationships between these organizations and the mystical groups is given special attention.

Dr P.E. Ivory
*Chinese socialism in comparative perspective*
The project examines the prospects for economic reform through improvements in the effectiveness of planning, through selective reliance on the market, or through some combination of both.

*Social segmentation and stratification in China and in general*
The concept of ethnicity is examined as an explanatory variable in social and political life in general.

E. Kato
*Japanese language learning by adult learners in the artificial and natural environment*
This study examines changes to the various aspects of the learner's language when the environment shifts from that of formal instruction in Australia to the natural settings in Japan.

Dr N.J. Knight and Professor C.P. Mackerras
*Marxism in Asia*
The project traces the development of Marxism in Asia. It deals with the ideas of Marx as they came to affect Asia, and traces their development through Lenin, Stalin and the Comintern. It deals with several Asian countries, including China, Korea, Japan and Vietnam. It focusses on the major issues raised by Marxism in these Asian countries and compares and contrasts the attitudes various Asian Marxist thinkers have adopted towards them. Most of the research was completed in 1983.

G. Kutash
*Syntactic and semantic analysis of complex sentences in Japanese*
The research project deals with the syntax and semantics of complex sentences in the Japanese language with special regard to the difficulties which foreign learners have when trying to comprehend and/or produce certain types of complex sentences in Japanese.

Professor D.L.S. Lim
*Industrial restructuring in ASEAN*
A study of ASEAN programmes to move away from labour-intensive and low-technology manufacturing activities toward skill- and capital-intensive ones.

*ASEAN-Australian trade in manufactured goods*
An analysis of the factors which determine trade in manufactured goods between ASEAN and Australia: a statistical study that is supplemented by survey work.

*Economics of Australian foreign aid*
An examination of the rationale, methods and results of Australian overseas aid, especially to Papua-New Guinea and ASEAN.

Professor C.P. Mackerras
*The performing arts of China’s minority nationalities*
This project is a study of inter-cultural relations between the dominant Han and China’s minority nationalities and includes case studies of the Uygurs and Mongolians. The project also examines the problems generally posed for China by the minority nationalities.

*Population problems in contemporary China*
Based on the findings of the mid-1982 census, this project examines the political ramifications of the problems of population growth in contemporary China.

*The social and literary aspects of contemporary Chinese theatre*
The project examines the recent changes in the structure of Chinese professional and amateur theatre troupes, including methods of payments of actors’ salaries and so on. It also looks at the impact on the content of dramas performed.

The Democratic People’s Republic of Korea in world affairs
The project examines the foreign policy of the DPRK and its relationship with the Soviet Union and China. It examines how these relationships affect its policy towards the United States and Japan. Its attitude towards the nonaligned movement is also being considered.

Dr T. Matsumoto
*An anthology of modern Japanese short stories*
This is a collection of short stories, hitherto
untranslated, representing the Showa period, together with explanatory introduction.

**J.J. McDonnell**
*Queensland coal industry*
Australia's most important export is black coal and our most important market is in Asia. A new phase of this continuing project was commenced, as were research projects on related trade relationships: Japan's trade with the United States and Canada and with Southeast Asia. The evolution of these relationships will have important effects on Australia, both directly and indirectly.

**Dr R.E. Mouer**
*Male-female wage differentials in Japan*
This project examines cross-industry and cross-prefectural variations in male-female wage differentials.

**Australian perceptions of Japan**
This project investigates the images of Japan held by Queensland in business, the union movement, education and the media. The study involves a content analysis of the printed mass media and of teaching on Japan in Queensland secondary schools.

**Popular culture in Japan**
A study of social values as recorded in music, proverbs, novels, comics, etc.

**Social change and internationalisation**
A study of how "internationalisation" is conceived in Japanese culture and how the idea of internationalisation is used as an ideology to promote domestic political goals.

**Cross-cultural comparisons of the perception of job situations in Japan, Australia, the U.S., Italy and three other nations**
This project examines the relative importance of occupation, industry, firm and geographic location in the evaluation of specific job situations.

**Dr D. Noer**
*Mohammad Hatta: a political portrait*
The project is about the role and influence of Indonesia's first Vice-President, including his agreements and disagreements with Sukarno, his views and actions related to the various political parties, mass organizations, the army, and the successive governments. It will also look at his ideas about Indonesia's society and state, and the world in general.

**Dr A.G. Rix**
*Australia-Japan trade in the 1950's*
This project analyses the development of Australia's trade with Japan after World War II. Dr Rix was a Visiting Fellow at the Australia-Japan Research Centre, ANU, between December 1983 and February 1984 to complete this work.

**Japan's comprehensive security and Australia**
A study of Australia's possible contribution to Japanese economic security.

**Japan's Oceania policy**
A chapter on Japan's policy towards Australia and New Zealand, for a book to be published by Westview Press.

**Japanese Marxism**
This project entails a survey of the main elements of Japanese Marxist thought.

**Dr D.C. Schak**
*Normative compliance in a small-scale society: a Taiwanese beggar leader*
This is a study of the lives of poor people in Taiwan, and their problems and prospects.

**Dr J. Sneddon**
*Comparative study of languages in Northern Indonesia*
An investigation of the inter-relationship of languages in North Sulawesi, Indonesia and the reconstruction of their common parent language. The study is also recording hitherto unstudied languages in Sulawesi, determining their geographical boundaries and regional dialects.

**W.F. Shepherd**
*International comparison of expenditure and income levels in ten countries*
A series of comparative cost expenditure studies represent short-term research interests which are gradually being extended to incorporate a large number of economies.

**International monetary co-operation: the developing process of financial integration**
This is part of a long-term project which examines how the international economy became financially integrated and to what extent this financial integration has led to a lack of autonomy in the conduct of domestic monetary management. The specific reference area for the latter is the Australian economy.

**Dr R.D. Walton**
*A history of Australia-Japan relations 1868-1970*
As a move towards a general history, research has begun in three particular areas: the Japanese in Australia to 1925; Australia, Japan, and the former German Pacific colonies; and Australian reactions to Japan's southward penetration, 1936-1941.

**The contemporary economic relations of Japan with countries of the Middle East**
Japan has been compelled to react strongly to the "oil crisis" of 1973 and to the Islamic Revolution. Research covers the past decade. It treats Japanese government bilateral aid to the
countries of the region and Japan's free enterprise activity in equity investment, trade construction and finance. Special emphasis has been placed on Iran.

G. Woolams
*Dialect study of the northern Batak languages, North Sumatra, Indonesia*

This project is aiming to define the geographical boundaries, describe the grammars (syntax and morphology), and determine the inter-relationship of the northern Batak languages known as Karo, Alas, Pakpak and Simelungan.

**Postgraduate Students**

M. Bocquet-Siek (PhD) – *An analysis of the social and cultural attitudes of the Peranakan Chinese in Java between the First and Second World Wars*

N. Chalmers (MPhil) – *Industrial relations in the small enterprise sector of Japanese industry*

G. Chan (PhD) – *China's participation in international non-governmental organisations, 1971-81*

M. Farquhar (PhD) – *Children's literature in China*

J. Hanafin (PhD) – *Intellectual debates of the early 60's in history, aesthetics and philosophy*

P. Healy (PhD) – *An analysis of the re-evaluation of Mao Zedong thought, 1976-82*

K-T. Hu (PhD) – *The Chinese student movement, 1915-1949*

N. Islam (PhD) – *The politics of national integration in new states: a comparative study of Pakistan and Malaysia 1957-1970*

M. Kamada (MPhil) – *Australian government policy on Indochina refugees*

S.-H. Jackson (MPhil) – *Chinese economics: post-Mao developments in labour and wages in industrial enterprises*

P. Jain (PhD) – *Urban politics in Japan: A study of Tokyo metropolis*

S. Kelly (PhD) – *The nature of Vietnam's relationship with its neighbours, Laos and Kampuchea, since 1975*


J. Lawe-Davies (PhD) – *The great powers and Vietnam 1965-1975*

E. Mower (PhD) – *Sex-role socialization, occupational choice and achievement motivation of Japanese professional career women and housewives*

M. Napier (PhD) – *Ideology and factional politics in China since the Third Plenum*

G. Yuen (PhD) – *The ethnomusicological examination of Chinese revolutionary songs, 1919-1949*

R. Nicholas (MPhil) – *Australia and ASEAN 1975-83: A case study in Australian foreign policy formulation*

B.L. Ng (PhD) – *Structure and processes in small industry development: a case study of the metal working industry in Malaysia*

M. Rajendran (PhD) – *ASEAN foreign relations 1975-78, with special reference to Japan and Australia*

M. Rose (MPhil) – *Indonesia free: a biography of Mohammed Hatta*

J. Selby (MPhil) – *Lifestyle of Anglo-Saxon and Chinese aged in Brisbane*

S. Shuja (PhD) – *The post-war political strategies of the two Korean governments in their global context*

G. Story (PhD) – *The politics of Sino-Japanese economic relations – the post-normalisation period*

H. Wagner (PhD) – *A study of the role of military in the Indonesian revolution, 1945-1949*

L. Wintour (MPhil) – *The role of women in the highlands of New Guinea*

C. Wong (PhD) – *The refugee problems of the southern Sung 960-1236*

G. Woolams (PhD) – *A grammar of Karo Batak*

G. W. Mouer (PhD) – *The teaching of English in Indonesia: the evaluation of the English curriculum for the Junior Secondary Schools in Indonesia*

M. Perumal (PhD) – *Economic growth and poverty in West Malaysia: an analysis of the distributional impacts of economic growth, 1957-1990*

M. Rose (MPhil) – *Indonesia free: a biography of Mohammed Hatta*

J. Selby (MPhil) – *Lifestyle of Anglo-Saxon and Chinese aged in Brisbane*

S. Shuja (PhD) – *The post-war political strategies of the two Korean governments in their global context*

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G. Yuen (PhD) – *The ethnomusicological examination of Chinese revolutionary songs, 1919-1949*

**1983 RESEARCH AWARDS**

*Australia-China Council*

Dr K.B. Bucknall – $3,107

Chinese language course in Chengdu
Australian Research Grants Scheme
Dr R.E. Elson – $5,468
*The social impact of forced civilizations in Java, 1830-1870*

University Research Grant
Dr E.S.K. Fung – $4,205
*Ideology and nationalist foreign policy*

Dr D.C. Schak – $4,170
*Socio-economic mobility among welfare recipients in Taiwan*

**PUBLICATIONS**

**Books**


MACKERRAS, C.P.M. ed. *Chinese theatre from its origins to the present day*. Honolulu, University of Hawaii Press, 1983.


**Chapters in Books**


MACKERRAS, C.P.M. "The drama of the Qing Dynasty". In Mackerras, C.P.M. ed. *Chinese theatre from its origins to the present day*. Honolulu, University of Hawaii Press, 1983, pp. 92-117.


**Journal Articles**


MACKERRAS, C.P.M. “One of the areas of Australia-China relations”. In Ten Year Links, in commemoration of the establishment of Australia-Asia diplomatic relations 73, 1983.


* In listing projects or publications where a Griffith University staff or student member is one of a number of contributors, the name of any contributor external to the University is indicated by an asterisk.

SCHOOL OF SCIENCE

A vigorous programme of research was undertaken by staff and postgraduate students in the School in 1983. Limited School funds are made available for research projects, the majority of which are supported from external sources. As a measure of the intensity of the research effort of the School, and its success, it may be noted that research staff of the School were successful in attracting $758,047 for support on a wide variety of projects.

Principal support was received from the following granting bodies:

- The Australian Research Grants Scheme
- Australian Associated Brewers
- National Energy and Research Development Demonstration Council
- The National Health and Medical Research Council
- The National Heart Foundation
- The Ramaciotti Foundation
- Alphapharm Pty. Ltd.
- The University Research Grants Scheme

The success which the School’s staff have enjoyed in attracting research funding suggests that the School’s research reputation is now well established and recognized on the national and international scene. Recognition which is in part also reflected by the number of postgraduate students who have been selected for postdoctoral awards following the successful completion of PhD studies in the School in 1983. Awards of particular interest being:

- J.P. Hardy who has subsequently been awarded a Royal Society Fellowship at Oxford University.
- W.D. Lawrance who was selected as a Miller Institute Research Fellow at the University of California (only ten Miller Fellowships are awarded annually).
- A. Pattnaik who has now been awarded a Post-Doctoral Research Fellowship at the School of Medicine, University of California.

Multidisciplinary research continued on a number of projects in the School in 1983. Notable amongst these being investigations into Nuclear Waste Disposal and the Molecular Basis of Biological Energy Transfer. The scope of the School’s research capacity was also further broadened in 1983 when Dr David Maguire joined the School. Dr Maguire will undertake research into the processes of venom production and venom characteristics of cone shells.

In 1983, research workers in the School had access to the excellent research facilities now
available to them as a result of joint ventures between Griffith and the University of Queensland and the Queensland Institute of Technology. Services in the areas of surface analysis, nuclear magnetic resonance spectroscopy and gas chromatography/mass spectroscopy are now available. The School is optimistic that the present buoyant levels of research and projects currently planned will continue to enhance the School’s reputation as a research centre of high standing.

**RESEARCH PROJECTS AND ACTIVITIES**

**Staff**

Dr G. Abraham  
*RNA transcription by Bunyaviruses*  
The Bunyaviridae is a family of arthropod borne viruses which have only recently been recognized as being biologically separate from other virus families. This project aims to develop a comprehensive study of RNA transcription by these viruses in order to clarify the mechanisms of the genetic expression, and to determine the properties of the messenger RNAs.

Dr S.E. Ashmore  
*Plant tumours and cell transformation*  
The purpose of this research is to study Agrobacterium induced plant tumours, particularly investigations of chromosomal and division abnormalities in cells of plant tumour origin. Also, the research attempts to understand the initiation of plant tumours, especially the physiological nature of the receptive cells (in terms of division characteristics and endogenous hormone levels) with a view to improvement of methods for cell transformation via the Ti plasmid.

**Plant culture and protoplast studies**  
The aim of this project is to investigate karyotype instability in culture in plant species with a small number of morphologically distinct chromosomes, e.g. Crepis capillaris (2n=6), Haploppus gracilis (2n=4). Protoplast fusion in these species and the chromosomal characteristics of the resultant hybrids will also be studied. Chromosome loss and rearrangement commonly occur in animal cell hybrids and have become a useful tool in the mapping of genetic markers.

Dr P.F. Barron, Dr R.L. Frost*, Dr P. Slade* and J. Skjemstad*  
*Solid state NMR of phyllosilicates*  
Research is underway on various types of sheet silicate minerals using solid state, high resolution NMR techniques. Relaxation studies are able to provide information on the components of interstratified species whilst cross-polarization dynamics are proving useful in studying thermally induced structural changes.

Dr P.F. Barron, Dr R.J. Frost* and L. Doimo*  
13C CP/MAS NMR study of the composition of woods and their biodegradation products  
In this project, 13C CP/MAS NMR analysis is being used to study the structure of whole woods and constituent lignins, cellulose, hemicellulose, etc. A similar analysis of biodegradation products is being used to investigate mechanisms of decomposition.

Dr P.F. Barron and P. O’Sullivan*  
*Application of the DEPT pulse sequence to the 13C NMR spectra of polymers*  
Solution state 13C NMR spectra provide important information on the structure of polymers. However, spectra are often complex and difficult to interpret unambiguously due to peak overlap and large linewidths. The effectiveness of the locally derived DEPT sequence is being studied in order to generate accurate 13C CH n (n=1-3) subspectra.

Dr P.F. Barron, Professor D.M. Doddrell, Dr D.E. Clegg and C. Davis*  
*Investigation of chemical shift anisotropy via solid state NMR*  
Research has shown that large variations in the anisotropy of the chemical shift can result in detrimental effects, with increasing magnetic fields, on the relaxation behaviour, resolution and chemical shift of the NMR spectra of nuclei in solution. The chemical shift anisotropy can only be measured accurately in the solid state via solid state NMR techniques. Measurements on a range of nuclei are in progress.

Dr I.R. Beacham  
*Genes encoding secreted enzymes, and their evolution*  
Studies have continued on genes (designated ush) encoding UDP-sugar hydrolase in Salmonella and E. coli. The gene from Salmonella has now been cloned, and ‘maxicell’ analysis and immuno-blotting experiments performed. As suspected from earlier studies, this gene seems to be a silent gene which has not hitherto been found in prokaryotes. DNA sequencing of both genes is in progress.

Dr I.R. Beacham and K.J. Spring*  
*A molecular analysis of L-asparaginase gene in E. coli*  
E. coli contains both cytoplasmic and secreted L-asparaginases, the latter being regulated by oxygen tension. The project aims to understand the organisation of asparaginase genes, their regulation and perhaps their evolution. It is also hoped to engineer overproduction of asparaginase II, which is used in leukaemia therapy.

Dr M.R. Bendall  
*Structure of small and medium size biological molecules by NMR*  
This project studies biological molecules such as small proteins and steroids, by the use of known magnetic resonance techniques such as
nuclear Overhauser enhancement measurements and the development of new techniques such as cross-polarization and two-dimensional NMR spectroscopy.

**The composition of coal and coal liqufication products**
In this project, new techniques such as cross-polarization and two-dimensional NMR spectroscopy both in the solid and liquid state are used to probe the extremely complex structure of coal and coal-derived products. Methods presently being developed will provide separate $^{13}$C spectra of quarternary, CH, CH$_2$ and CH$_3$ types of carbon atoms.

**Topical Magnetic Resonance**
Topical Magnetic Resonance is a new NMR research field and involves the study of parts, such as organs or muscles, of whole living animals. A major problem of the technique is to obtain NMR signals from one particular area without sampling adjacent areas. Research to date has shown that multipulse NMR may be used to localise the sample region at least partially. It is expected that the technique will be extended to provide complete localization thus providing a simple alternative to the more cumbersome methods presently in use.

Dr M.W. Bridgstock
**Household energy use survey**
A survey is being undertaken of 500 Brisbane homes to assess changes in energy use patterns.

**Research without integrity**
A study is being made of factors leading to 'cheating' in science (falsifying results, etc.) and of the bases and operations of 'pseudo-science'.

Dr D.F. Burch
**The political economy of technological choice: overseas aid and the transfer of technology to the Third World**
This study is concerned with an historical analysis of Britain's aid programme, from the 1920's to the present, and examines the causes and consequences of the technological choices made under this programme. The nature of these choices, and their impact upon the recipient countries of the Third World, are further examined in a case study of agricultural mechanisation in Sri Lanka.

Dr W.K. Busfield
**Gamma irradiation of polyolefines**
A study is continuing on the effects of gamma-iradiolysis on the mechanical and structural properties of polyolefines in the form of films, tapes and fibres with varying initial crystalline structure. Currently, emphasis is being placed on the influence of gaseous additives which enhance cross-linking during irradiation, and on the nature of the active sites as deduced by ESR spectroscopy.

Dr W.K. Busfield and Dr P.F. Barron
**Molecular motion in condensed polymers**
Solid state NMR spectroscopy is being used to study molecular motion in condensed polymers, in particular those in the region of sub-glass transition temperatures.

Dr F.M. Clarke
**Reproductive immunology: isolation and biochemical characterization of early pregnancy factor**
The failure of the maternal immune system to identify, then reject, the fetus as non-self is a phenomenon for which no entirely satisfactory explanation has yet been found. Early pregnancy factor (EPF), a new pregnancy-specific protein, has been detected in the maternal serum within hours of fertilisation and has been shown to have immunosuppressive activity. The project aims are to isolate and biochemically characterise EPF; to determine its role in reproductive physiology; and to determine its function as a immunosuppresive agent. These investigations could have implications in the development of new birth control procedures as well as the understanding and possible treatment of some forms of infertility.

Dr D.E. Clegg
**The interaction between vanadium (II) solutions and endrin**
In this project, reactions between low valence transition metal ions and chlorinated hydrocarbons have been used to confirm the identity of these substances when found in tissues and food. Studies of the reaction between V(II) and endrin show that the metal ion acts firstly as a Lewis acid catalyst to isomerise endrin to a cyclic ketone and then as a halogen abstracting agent.

Dr D.E. Clegg
**The detection and quantitation of nanmole levels of free fatty acids in butter using HPLC**
Lipolysis on hydrolytic randicity of milk fat with resultant quality impairment is a major problem
of the dairy industry. The risks to the flavour and
keeping quality of dairy products require a
reliable, accurate and sensitive methodology to
be developed for the measurement of hydrolysis
products such as free fatty acids. This project is
concerned with developing a method for the
HPLC separation and estimation of individual
free fatty acids in butter resulting from lipolysis.

Dr D.E. Clegg, I.W. Eddington, P. McKinnon* and
M. Scheumack*

Lead in deciduous teeth of Queensland children
Many surveys have been carried out to
determine the blood lead level in subjects in
different work situations, localities, etc., but this
is generally regarded as an indicator of current
exposure. A Queensland-wide study of lead in
deciduous teeth of children is being undertaken
in order (a) to assess its use as a screening
procedure for cases of high exposure, (b) to
determine whether there is any association
between teeth lead levels and factors such as
locality, eating habits, parents’ occupations, etc.

Dr J.F. Dobson and R.O. James*

Fundamental electron-gas theory
Many electronic phenomena can only be
understood properly when the correlations
between electrons are taken into account. The
present project concerns the development of a
modified Kohn-Sham theory which avoids the
defect of previous methods. Possible
applications are in chemistry (accurate ab initio
energy calculations for molecules which are too
large for the configuration interaction method)
and physics (band calculations for molecules
which are too large for the configuration
interaction method and band calculations for
insulators, semiconductors and semimetals).

Dr J.F. Dobson, J.H. Rose* and J.R. Mahanty*

Theory of metal surfaces
The study of metal surfaces is vital in
connection with catalysis, adhesion and a
variety of other important applications. The aim
of this project is to obtain a true theoretical
understanding of metal surfaces using no
phenomenologically adjustable surface
parameters. Firstly, an inhomogeneous
electron-gas linear-response approach has
been developed. This has yielded the best
results in existence to date for the
face-dependent surface energies of the simple
metals at \( T = 0 \text{K} \). Formal expressions have also
been obtained for relaxation of ionic positions
due to the surface, for the surface lattice
dynamical matrix and for the
temperature-dependent surface free energy.
Work on the dynamic surface response is
proceeding.

Professor D.M. Doddrell

Multipulse NMR
Research is underway into the application of
multipulse NMR techniques to editing NMR
spectra - spin echo and polarization transfer
techniques. Instrumentation for multipulse NMR,
and pulse programmer design amplifier design
are also being studies.

Solid state NMR
The aim of this research is to measure the
chemical shift anisotropies in solids with
particular reference to Pt and Hg. Correlations
with chemical structure are also being
investigated.

Biological NMR
Probe design for performing topical NMR on live
animals with particular reference to \( ^{31}\text{P} \) and \( ^{13}\text{C} \)
NMR is the focus of this research.

Dr J.S.H. Elkington and E.W. Thompson

Biochemical studies on the testis
The testis has two cell lines which control the
production of spermatocytes from germinal cells.
These are the Leydig cells and Sertoli cells.
Current evidence supports the hypothesis that
hormones produced by the Leydig cells
(testosterone) are pituitary gland (follicle
stimulating) hormones which interact with the
Sertoli cells and occupy a central role in
controlling sperm production. Present
investigations focus on localization of
components of the extracellular matrix
(collagen, fibronectin and proteoglycans) in the
rat testis. This work aims to lead to a clearer
understanding of testicular function.

Dr H.P.W. Gottlieb

Vibration theory and acoustics
The effect of an enclosed air cavity on the
characteristic vibration frequencies of an
annular membrane had been analysed
mathematically previously. A different
technique, utilizing a Green’s function, was
employed for the case of the rectangular
(including square) membrane. This project
extends that research and studies the effect of
radiation into the surrounding air.

Special functions
Some extremely interesting properties and
formulae for solutions of eigenvalue equations
involving Bessel functions are being
investigated.

Dr P.C. Healy, J.C. Dyason and Professor A.H.
White*

Novel chemistry of copper (I) compounds
In recent years a very wide range of novel
compounds of copper have been prepared, and
many of these compounds have proved to be of
technological value (e.g. catalysis of organic
reactions and polymerisation). In this project, a
wide range of new complexes of copper (I),
particularly with nitrogen base ligands are being
synthesized. Several new monomeric,
obligimeric and polymeric structural forms have
been characterized by X-ray crystallography
and solid state \( ^{31}\text{P} \) NMR.
Genetic regulation of alcohol drinking behaviour in the mouse

Dr. R.S. Holmes, Dr. J.A. Duley, and T.L. Seeley

Inbred strains of mice differ in terms of their alcohol drinking behaviour when given a choice between 10 per cent ethanol in water and ethanol free water. Under laboratory conditions, "drinking" strains consume 1.5 mgm gm⁻¹ day⁻¹ ethanol whereas "non-drinkers" consume approximately 3 per cent of that amount. By segregation analyses the genetic basis of this phenomenon and the possible association of "drinking genes" with biochemical loci involved in the metabolism of ethanol are being investigated.

Biological genetics of enzymes of neurotransmitter metabolism in the mouse

Dr. R.S. Holmes, Dr. J.A. Duley, and T.L. Seeley

Biogenetic amines play a key role in neurotransmission and in regulating physiological responses in the body. These substances are metabolized predominantly via monoamine oxidase activity, thereby generating biogenic aldehydes. This project investigates the genetic regulation, isozymic status and biochemical properties of a group of enzymes called aldehyde reductases which utilize biogenic aldehydes as substrates in the model organism, the mouse.

Biochemical genetics of enzymes of alcohol metabolism in the mouse

Dr. R.S. Holmes, Dr. J.A. Duley, and Dr. O. Harris*

This project involves a study of the biochemical properties of enzymes of ethanol metabolism in man. Previous studies have established that genetic factors play some role in the development of primary alcoholism in the community. The major aims of this present study are to develop procedures for routinely typing individuals for genetic variants of alcohol dehydrogenase, aldehyde dehydrogenase, aldehyde reductase and monoamine oxidase, to examine their cellular and subcellular distributions in human liver, blood cells and fibroblasts and to investigate possible association to genetic variability with the incidence of alcohol related disease in man.

Variability and adaptation of plant populations on coral atolls

Dr. R.S. Holmes and G.J. Yeoman

This project involves a study of the variability of introduced and naturally occurring plant populations on coral atolls. Initially, a recently introduced species (Cenchrus echinatus) to a number of islands in the Capricorn group, is being studied at the genetic and ecological level.

Pressure effects in low temperature metal oxidation

Dr. G.A. Hope

The project is studying the oxidation of high purity chromium films with oxygen, using electron spectroscopy for chemical analysis (ESCA), electrical resistance and ellipsometric techniques to follow the reaction progress. It is also important to the understanding of the reaction, that the mechanism of oxidation be determined, and experiments which probe the diffusion process during the oxide growth are undertaken. In this way the actual experimental dependence of oxidation rate on pressure is being delineated, with the ultimate aim of a more sound theoretical understanding of the process of metal oxidation.

Photoelectrochemical reactions of semiconducting electrodes

Dr. M.G. Irving

The project is investigating several novel electrode materials for use in photoelectrolysis and photocatalysis reactions. Important breakthroughs have been made in the protection of silicon surfaces, and the use of polycrystalline materials for energy conversion.

Alcohol-induced hepatic fibrosis

Dr. M.G. Irving

Alcohol consumption is the most commonly associated etiologic factor in the development of hepatic fibrosis and cirrhosis. The project examines collagen synthesis in vivo and in isolated hepatic cell cultures consequent to ethanol ingestion. The effect of antifibrotic agents upon these processes is being investigated to optimise therapy for patients with alcoholic hepatitis and cirrhosis.
Liposome targeting of chemotherapeutic drugs
One of the major problems of cancer chemotherapy is that many of these drugs are highly toxic to normal tissues. This project investigates the pharmacokinetics and tissue targeting of liposome encapsulated drugs using nuclear magnetic spectroscopic techniques with the view to developing in vivo human topical scanning procedures.

Dr M.G. Irving, Dr R.S. Holmes, S.J. Simpson and Professor D.M. Doddrell
Ethanol metabolism in isolated liver cells using 1H[13C] multipulse nuclear magnetic resonance studies
This project is investigating metabolic processes involved in ethanol degradation in liver cells using multipulse nuclear magnetic resonance (NMR) spectroscopy. The aim of this research is to determine, in the first instance, whether NMR spectroscopy can be used to quantitate metabolic rates of ethanol oxidation using isolated liver cells and to examine genetic differences in the metabolism of ethanol by mammalian liver.

Dr I.D. Jenkins
Carbohydrate phosphonates
Relatively few investigations have been reported using phosphonic analogues of carbohydrate phosphates, yet in the particular case of glycosyl phosphates it is known that these compounds are extremely important intermediates in biochemical glycosyl-transfer reactions. The aim of this project is to develop a synthesis of glycosyl phosphonates directly from the free sugars. It is planned to synthesise D-glucose 1-phosphonate, D-fructose 2-phosphonate and D-ribose 1-phosphonate. The first compound could prove of great significance in biochemistry as an analogue of glucose 1-phosphate; the second is of relevance to studies on invertebrate, whilst the third would be a precursor of novel nucleosides in which the nitrogen of the base is replaced by phosphorus.

Synthesis of biologically important carbohydrate derivatives
The synthesis of a range of new derivatives of sucrose has been achieved. These studies are continuing in the direction of immunologically important glycolipids, especially Cord Factor Analogues.

Reactions of phosphines with diethyl azodicarboxylate (DEAD) and DEAD-analogues
Recent work from this laboratory has shown that the Mitsunobu reaction takes place through the intermediary of dialkoxythriphenylphosphoranes. The aims of this project are to examine the effect of changes in the structure of the phospine on the outcome of the Mitsunobu reaction and to explore the use of analogues of DEAD in this reaction.

The use of tricarbonyliron complexes in organic synthesis
Allyl and benzyl are useful protecting groups for hydroxyls in organic chemistry but their introduction usually requires strongly basic conditions. One of the aims of this project is to investigate the use of tricarbonyliron complexes of allyl cations and tricarbonylchromium complexes of benzyl cations as potentially mild methods of introducing the allyl and benzyl protecting groups.

Dr I.D. Jenkins and Dr J. Leah*
Amino acid neurotransmitters
It is generally accepted that amino acids are the major transmitters in the central nervous system. The aim of this project is to synthesise conformationally restricted analogues of the amino acid transmitters glutamic and aspartic acids, and examine their actions in the central nervous system.

Dr A.E.W. Knight
Collision-induced energy transfer in polyatomic molecules
This research is directed towards obtaining experimental data concerning cross sections and propensity rules for state-to-state collision-induced rotational and vibrational relaxation in molecules such as benzene, p-difluorobenzene, naphthalene and azulene. Laser-excited single vibronic level fluorescence is used to characterize excited state collision dynamics. A new technique has been developed recently, namely stimulated-emission-pumping/single vibronic level fluorescence probing (SEP-SVLF), for obtaining comparable dynamical information for levels in ground electronic states. Theoretical modelling of the mechanisms for collision-induced energy transfer accompanies the experimental studies.

Intramolecular energy redistribution (quantum chaos) in molecular systems
In polyatomic molecules, energy deposited initially in a well-defined quantum state may be redistributed among other internal modes in the molecule without the need for any external perturbation. This process of energy randomization is a cornerstone assumption in modern theories of chemical reactions. However, experimental characterization of this transition from "quantum order" to "quantum chaos" has emerged only in recent years. These experimental studies involve tunable laser excitation and fluorescence spectroscopy of isolated polyatomics. It has been found that the approach towards quantum chaos can be mode-selective, and that the subtle interactions between vibrational and rotational motion are an important controlling factor in the overall process of energy redistribution.
Dynamics of molecules and clusters in molecular beams
Spectroscopy of polyatomic molecules in supersonic free jets enjoys considerable advantages over conventional studies carried out in bulb samples. The dramatic cooling afforded by the supersonic expansion greatly simplifies the spectra of large polyatomics. Accordingly, studies of energy transfer, intramolecular and intermolecular interactions become more exacting. Laser excitation spectra and dispersed fluorescence spectra of isolated jet-cooled molecules such as azulene and p-difluorobenzene have yielded new information on vibrational redistribution in excited electronic states. These studies explore the fundamental aspects of intermolecular dynamics and chemical kinetics.

Dr A.E.W. Knight, Dr P.J. Rogers and Dr P.C. Healy
Light induced processes in biology
Resonance Raman spectroscopy using tunable lasers has opened up a new field whereby the structure of localised regions of large molecules, including biological molecules, may be probed. This project is concerned with the development and implementation of laser techniques for measuring time-resolved Raman spectra of biological molecules on time scales as short as $10^{-10}$ seconds. The high powers associated with the output of pulsed tunable dye lasers enables one to make use of non-linear techniques such as stimulated Raman scattering to generate intense excitation wavelengths in the ultraviolet. These spectroscopic methods are currently being used to investigate the mechanism of the photochemical cycle in bacteriorhodopsin, a membrane protein in the halophilic bacterium, Halobacterium halobium.

Dr I. Lowe
Future energy demand
Comparative studies of the changing pattern of energy use in different industrialized countries have been conducted, providing insights into the likely pattern of future demand in Australia. Future Australian oil production and various possible production profiles for alternative liquid fuels are being modelled to assess possible contributions to future demand. The political, social and economic implications of various possible patterns of supply and demand are being studied.

Impact of conservation campaigns
Several industrial countries have now been operating fuel conservation campaigns for some years. A comparative study of the measures used in various countries to conserve fuel has been carried out, and the effectiveness of different approaches has been analysed.

Dr I. Lowe, Dr M.W. Bridgstock, I.W. Eddington and Dr D. Crossley
Changes in attitudes and behaviour regarding energy conservation in the home
This study is following up an earlier survey of attitudes and behaviour regarding energy conservation in the home, carried out in Brisbane in 1977. The aims are to assess changes since 1977 in knowledge of, and attitudes toward, energy conservation in the home. Attitudes and knowledge will be related to actions in the field, and to similar studies carried out in other States.

Dr D.J. Maguire
Biosynthesis and structure of conotoxins
There are more than 500 living species of cone shells (Conidae), many of them represented on the Great Barrier Reef. All of them possess a venom apparatus which they use to capture their prey and which in some cases has been known to cause fatalities in man. In an attempt to understand the process of venom production by this and related species, a molecular genetic approach is being applied to some of those species. A mixed oligonucleotide which can be used to probe for nucleic acid sequences specifying part of the N-terminus of Conotoxin G1 and G1A of Conus geographus has been prepared, and is now being used to identify complementary sequences of cloned DNA from Conus species.

Professor C.J. Masters, S. Reid and L. Humphreys
Interactions between enzymes and cellular structure
This project is concerned with the interactions between soluble enzyme systems (e.g. the glycolytic enzymes) and structural elements of the cellular microenvironment (e.g. contractile filaments). It investigates the significance of these interactions in relation to metabolic control, and the integration of the structural and functional requirements of cells during tissue differentiation.

Professor C.J. Masters, Dr D. Crane, A.C. Hemsley and M.S. Pegg
The biochemistry of peroxisomes
Peroxisomes are subcellular organelles which have a wide distribution in mammalian tissues and exert an important influence on the regulation of lipid metabolism. This project is designed to investigate aspects of peroxisomal biochemistry such as biogenesis and function, and the mechanism of action of peroxisome proliferators - drugs which have been widely used in treatment of congestive heart disease.

Dr S. Myhra, Professor R.L. Segall, Dr R.St.C. Smart and Dr P.S. Turner
Dissolution of ionic and semiconducting oxides, high level radioactive waste solids
Many very soluble oxides dissolve extremely slowly. This property can be useful - as in corrosion resistance - or can constitute a
serious practical difficulty - as in the leaching of oxide ores to produce solutions of metals ions. Oxide glasses and synthetic rock materials (SYNROC) have recently been proposed as solid matrices for incorporation of high level radioactive waste for long term storage. The chemical resistance of these materials to dissolution is clearly of critical importance for safe storage and several aspects of this phenomenon are being studied in the present project.

Radiation damage in solids
Incident ionizing radiations are known to produce a variety of changes in the physico-chemical properties of solids. Fundamental and applied aspects of changes to the atomic and electronic structures in crystalline and amorphous solids are being studied in this project.

Dr S. Myhra, Professor R.L. Segall, Dr R.St.C. Smart and Dr P.S. Turner
Surface science in ceramics
Modern surface analytical techniques have provided the tools for detailed investigation of the structure and properties of solid surfaces. In this project, those techniques are applied to complex ceramic minerals such as SYNROC and other titanates.

Dr A.J. O’Connor
Stochastic problems
Research is underway into the propagation of energy in disordered and anharmonic lattices, the statistical mechanics of simple disordered systems, and non-linear boundary value problems for the heat equation.

Dr D.T. Pegg
Development of NMR pulse sequences
Work in collaboration with Dr M.R. Bendall on the development of multipulse NMR sequences continued. The perfection of the remarkably powerful Heisenberg picture theoretical approach has made the analysis of pulse sequences quite simple for any number of nuclei of any spin. Its most exciting prediction so far was confirmed precisely by the first experimental detection of polarization transfer between quadrupolar nuclei.

Laser physics
A theoretical study was carried out on the influence of two amplitude modulated laser beams on a three-level atom. The modulation phases complement the Gottlieb quadrature configuration.

Dr R.J. Quinn, Dr R.J. Willis and A. Baldassi*
The synthesis of potential agonists of the coronary adenosine receptor
Adenosine is an important regulator of coronary vascular resistance as it causes relaxation of coronary vascular smooth muscle and increases local blood flow and oxygen delivery. Adenosine produces these effects by interacting with a receptor. This work is designed to synthesise novel compounds which will aid in elucidating the binding requirements of the receptor. Adenosine itself, while it is the natural regulator, is deaminated by adenosine deaminase and is inactive after oral administration. This project also aims to obtain non-deaminated analogues which would be active after oral administration and so lead to a useful new therapeutic agent.

Dr R.J. Quinn, Dr I.D. Jenkins and M. Groesz*
Synthesis of potential anti-cancer compounds
The aim of this project is to undertake the rational design of inhibitors of enzymes which have been implicated in cancer and to pursue the synthesis of these compounds. Malignant and premalignant tumours, for example, are characterised by an uncontrolled production of mevalonic acid, and this compound, independent of its function as a cholesterol precursor, plays an essential role in DNA synthesis. Isopentenyladenine may mediate the regulatory role of mevalonic in DNA replication and specific inhibition of its synthesis is being sought in order to further elucidate the exact mechanism by which isopentenyladenine regulates DNA replication and for evaluation as an approach to anti-tumour compounds.

Dr R.J. Quinn and M. Hudson*
Chemical regulation of biological processes – host release factors in marine symbioses
The aim of the project is to isolate, purify and identify the compounds which are utilized by marine invertebrates in symbiotic associations with zooxanthellae to achieve release of nutrients from the zooxanthellae symbiont. Symbiosis is an important phenomenon in the marine environment. Zooxanthellae (the algal symbiont) contribute significantly to world ocean productivity and particularly to coral reef benthic primary productivity. The zooxanthellae have an important role in the nutrition of the host animals and are essential for the skeleton building process in hard corals. Translocation of fixed carbon from the zooxanthellae to the host is controlled by the host chemically using “host release factors”.

Dr R.J. Quinn, I.V. Savage, Professor P.R. Andrews* and Dr D. Winkler*
Interactions at receptor sites, conformationally rigid molecules as probes to investigate biological receptors
The aim of this project is to use information available about the interaction of drugs with their receptors to design compounds with potential therapeutic use. Computer graphic study of known barbiturates has allowed definition of the receptor sites for barbiturates which display anti-convulsant properties and barbiturates which display convulsant properties. This model, by defining the regions of space occupied by the respective anti-convulsant and convulsant barbiturates, provided the first indication of the
stereochemical properties of the binding sites for both classes of barbiturates. This data may allow the design of anti-convulsant and anaesthetic barbiturates which lack the excitatory side effects frequently seen prior to and during barbiturate anaesthesia.

Dr P.J. Rogers
Structure and function of bacteriorhodopsin
The pigment, bacteriorhodopsin, may generate a transmembrane electrochemical proton gradient upon illumination. Because of the relevance this simple system has to energy transduction in higher cells, and to the process of vision itself, the structure and function of bacteriorhodopsin are being studied.

Studies of biological energy transduction and active transport using high field NMR techniques
Bacteria and higher cells utilise transmembrane chemical potentials for energy transduction and active transport. In addition, regions of localized membrane polarization may act as vectorial loci for differentiation in eukaryotic cells. The specific goals of the present project are: (a) to rationalize the effects of sodium, potassium and phosphate ions on the proton pumping activity of both the ATPase and the respiratory chain and thus to describe the basis of pH homeostasis in the Streptococci and the enteric bacteria; (b) to study sugar uptake via phosphotransferase systems and electrogenic carriers in these organisms as a function of membrane energization; (c) to characterize the proton/lactate carrier in relation to energy transduction and secondary solute uptake in bacterial cells during homofermentation and also in animal cells, especially transformed lines during glycolysis. In addition, studies are underway to consider whether localized membrane potentials stimulate differentiation, in particular apical growth in model fungal systems.

Dr R.S.C. Smart
Surface chemistry of oxides, glasses and soil minerals
Studies of the interaction of H$_2$O, acidic solutions and anionic adsorbates (e.g. phosphate, borate, molybdate, sulphate) with these surfaces are made using a variety of techniques such as infrared spectroscopy of the molecular structure of adsorbed species, photoelectron spectroscopy of electronic surface structure; secondary ion mass spectrometric analysis of the first few atomic layers on the surface (to parts per million level), absorption isotherms to determine amounts adsorbed under different solution temperature, and surface area measurements (i.e. B.E.T. studies).

Dr M.C. Standage and Dr W.R. MacGillivray
Current optical transients and optical bistability in atomic systems
The coherent optical transient aspect of this project studies the transient interaction of intense single-mode laser radiation with atoms both from a theoretical and experimental point of view. The major experimental technique used to date has been the application of very fast step function electric field pulses to an atomic vapour. The optical bistability aspect of this project is a study of optical hysteresis effects in an optical cavity containing a non-linear medium, in this case an atomic vapour or an array of atomic beams. The aim is to investigate the phenomena which underlie optical bistability in Fabry-Perot and ring cavity configurations. Transient studies using both pulsed electric fields and pulsed optical fields will also be carried out.

Atomic collision studies using stepwise electron/laser excitation
In this project, atoms are stepwise excited using both electron and laser excitation. Line polarization and electron-photon coincidence measurements on the fluorescence emitted from stepwise excited atoms allow the electron excitation processes to be studied. A variety of new experiments have been made possible by this technique such as experiments which study the role of fine and hyperfine structure effects in atomic collision physics. It has also provided new ways of studying the electron excitation of vacuum ultraviolet transitions and of metastable levels. Current experiments are aimed at understanding fine and hyperfine structure effects in electron-mercury atom collisions using line polarisation and electron-proton coincidence measurements.

A study of Rydberg atoms using transient spectroscopy and electron scattering
This project consists of two separate studies of Rydberg (highly excited) atoms. One of these utilizes coherent optical transient techniques to study the spectroscopy of Rydberg atoms excited by two step laser excitation. Both pulsed electric fields and pulsed optical fields are used in this work. The other study makes use of two step laser excitation to produce Rydberg atoms which are subject to electron bombardment. The detection of super-elastically scattered electrons will be used to provide a new probe of Rydberg atom/electron collisions.

Dr D.V. Thiel
Surface impedance measurements
A small battery-powered portable surface impedance meter was constructed in 1978 to monitor the surface impedance of the earth at very low frequency using emissions from North West Cape, Western Australia. This prototype while yielding results which correlated with the geological structure of the earth in the immediate vicinity suffered from a number of electronic problems. An improved version of the surface impedance meter has been constructed and is currently undergoing tests. This particular measurement has been shown
theoretically to be more reliable than other techniques.

Angle of arrival measurements
A semi-portable microprocessor based data acquisition system has been configured with a set of VLF antenna receiver pairs to determine continuously the angle of arrival and bearing angle of a VLF signal propagating over a 4 Mm propagation path. The object of this investigation is to explain the mechanism of anomalous behaviour at sunrise and sunset and to ascertain conditions for reliable surface impedance measures.

Antenna impedance effects in the vicinity of a ground plane
Different theoretically deduced formulas predicting the input impedance of an electrically short horizontal thin wire antenna in the vicinity of an earth plane have yielded dramatically different results. Experimental measurements are currently being undertaken in an attempt to resolve this.

Dr P.S. Turner
Reflection and refraction of electrons at crystal faces
Images of crystal surfaces obtained in the transmission electron microscopes using electrons reflected from or refracted at crystal faces contain detailed information about the crystal surfaces. Techniques for recording and interpreting such images are being developed.

Dr R.J. Willis
Mechanism of contractile failure in myocardial ischaemia
$^{31}$p NMR spectroscopy is being used to study energy metabolism and acid/base balance in isolated perfused hearts. The relationship between biochemical changes induced by ischaemia and the concomitant decline in heart function is being examined.

Is the disturbance of calcium homestasis the final catastrophic event leading to irreversible cell injury?
A general feature of cell injury is the "critical point" beyond which the injury becomes irreversible. This "critical point" may be related to a failure of calcium homestasis. The two models of cell injury currently being examined are halolane hepatotoxicity and the calcium paradox phenomenon in heart.

Postgraduate Students

W. Baker (MPhil) – Laser spectroscopy in molecular beams

W.M. Brooks (PhD) – NMR studies of biological molecular systems

D.M. Burns (PhD) – Bacterial and yeast molecular genetics

M.C. Dash (MPhil) – A study on the surface and structural components of membranes from bovine milk

J.M. Davis (PhD) – History of chemical technology in Queensland within the sugar industry

L.X. Doan (MPhil) – Synthesis and reactions of new derivative of carbohydrates

J.C. Dyason (PhD) – Time resolved Raman spectroscopy

A.R. Garrett (MPhil) – Acetate kinase from Brochothrix thermosphactum: purification subunit composition, kinetics and relationship to growth efficiency

W.J. Gilchrist (PhD) – The evaluation of the appropriateness of science and technical education in a developing country

J.N. Gore (MPhil) – Indigenous phosphates for the Australian fertilizer industry: a technology assessment

P.A. Grieve (PhD) – Examination of the enzyme systems of the bovine leucocytes and the sub-cellular distribution of these enzymes

J.P. Hardy (PhD) – Time resolved spectroscopy of biological processes

G.H. Harris (MPhil) – Theory of dynamic metallic surface susceptibility

W.G. Hunt (PhD) – Life sciences

P. Jerlstrom (PhD) – Microbial genetics

S.H. Kable (PhD) – Chemical physics

R.J. Koch (MPhil) – The influence of arrival angle on VLF surface impedance measurements over an anisotropic earth

L.B. Kurth (MPhil) – Studies of crosslinking in protein

J.A. Laurent (PhD) – Influence of developments in scientific and technical education on labour movements in later nineteenth century Britain

W.D. Lawrance (PhD) – Chemical reaction dynamics

L.N. Lester (MPhil) – Drosophila alcohol dehydrogenase

J. Liu (MPhil) – A molecular analysis of the cpd B gene with particular reference to the bifunctional nature of its protein product

J.M. McGovern (MPhil) – Fuel alternatives for freight transport in Queensland

M. Marshman (PhD) – A spectroscopic study of Rydberg atoms
A.V. McPherson (MPhil) – Biochemistry of milk fat global membrane
J. Moran (MPhil) – Scientists in the political and public arena
D. Moss (MPhil) – The role of defective thermogenesis in the development of obesity
D.J. Muller (PhD) – Laser spectroscopic studies of molecular systems
T.B. Parsons (MPhil) – Collisional energy transfer in polyatomic molecules
G.J. Patch (MPhil) – The reduction of chlorinated cylodiene endrin by aqueous - DMF Vanadium II solutions
A.K. Pattnaik (PhD) – RNA transcription in akabane virus infected cells
W.R. Pease (MPhil) – Dissolution studies and surface characteristics of nickel oxide
M.S. Pegg (PhD) – Peroxisomal biochemistry
P.N. Proschogo (MPhil) – Analysis of fats and oils
A.W. Reed (MPhil) – A comparative assessment of methods for the estimation of free fatty acids at the nanogram level in butter
R.M. Reeve (MPhil) – High resolution electron microscope and infrared studies of surface structures of metal oxides
S. Reid (PhD) – Interactions of glycolytic enzymes with structural proteins
W.E. Schulz (PhD) – Study of optical bistability in atomic systems
I.V. Savage (PhD) – Interaction at receptor sites: conformationally rigid molecules as probes to investigate biological receptors
T.L. Seeley (MPhil) – Biochemical genetics of alcohol dehydrogenase and aldehyde reductase in the mouse
B.J. Shay (MPhil) – Plasmic mediated amino-acid metabolism in the Lacto bacillii
S.J. Simpson (PhD) – Biochemistry
S.P. Singh (PhD) – Energy transduction in gram positive bacteria
P. Stephan (PhD) – Glycolytic enzyme organisation
S. Thang (PhD) – Mechanism of free radical initiated polymerization
E.W. Thompson (PhD) – Fibronectin in rat testis

N.A. Tingle (MPhil) – The nature, role, influence and effectiveness of general practitioners’ organizations on health issues in Australia in recent times
R. Vink (PhD) – Microbial energetics
M.L.H. Von Itzstein (PhD) – Aspects of DEAD-TPP type reactions and applications in organic synthesis
A. Wagner (MPhil) – Calcium antagonists and myocardial ischaemia
R.R. Walding (MPhil) – The impact of computers and computing technology on Queensland high school science education
C.J. Webb (PhD) – Stepwise electron/laser studies of atoms
J.M. Whitta (MPhil) – The determination of priorities in Australian research and development
M.S. Wilson (PhD) – Reproductive immunology
X.W. Wu (MPhil) – Phase stability measurements at VLF using a modified phase locked loop
E.J. Yeoman (PhD) – Variability of island populations of native plants

1983 RESEARCH AWARDS

Alphapharm Pty. Ltd.
Dr R.J. Quinn – $14,845
Chemical regulation of biological processes - host release factors in marine symbioses

Australian Associated Brewers
Dr R.S. Holmes – $25,400
Genetic and biochemical studies on enzymes of alcohol and neurotransmitter metabolism

Australian Atomic Energy Commission
Dr R.St.C. Smart, Dr S. Myhra, Dr P.S. Turner and Professor R.L. Segall – $3,460
Surface and bulk modification of chemical waste solids in hydrothermal conditions

Australian Institute of Nuclear Science and Engineering
Dr W.K. Busfield – $1,000
Irradiation effects on the structure of polypropylene

Professor R.L. Segall, Dr R.St.C. Smart, Dr P.S. Turner and Dr S. Myhra – $2,300
The effect of heavy ion irradiation on the chemical durability of HLW glasses
Australian Meat Research

Dr G. Abraham – $15,177
*The genetic cloning of akabane virus genes in a bacterial plasmid*

Australian Research Grants Scheme

Dr S.E. Ashmore – $18,000
*Studies on tumour initiation in plant cells*

Dr I.R. Beacham – $20,000
*A molecular analysis of L-asparaginase genes in E.coli*

Dr M.R. Benda and Dr P.J. Rogers – $18,000
*Study of biological phenomena by high field NMR spectroscopy*

Dr W.K. Busfield and Dr P.F. Barron – $10,000
*Molecular motion in glassy polymers*

Dr F.M. Clarke – $20,500
*The biological role of glycolytic enzyme – cytoskeletal protein in interactions in muscle and non-muscle cells*

Dr D.E. Clegg, Professor D.M. Doddrell and Dr P.F. Barron – $11,750
*Solid state NMR Investigation of CSA of inorganic nuclei*

Dr R.S. Holmes – $27,719
*Genetic and biochemical studies on enzymes of the house mouse, Mus musculus*

Dr G.A. Hope – $5,000
*The pressure dependence of chromium oxidation*

Dr I.D. Jenkins – $9,614
*Synthesis of immunologically important glycolipids – cord factor analogues*

Dr A.E.W. Knight and Dr P.J. Rogers – $20,440
*Time resolved Raman spectroscopy*

Dr A.E.W. Knight – $58,840
*Dynamics of energised polyatomic molecules*

Dr W.R. MacGillivray and Dr M.C. Standage – $5,000
*Atomic collision studies using stepwise electron/laser excitation*

Dr W.R. MacGillivray and Dr M.C. Standage – $14,800
*Coherent optical transients and optical bistability in atomic systems*

Professor C.J. Masters – $27,314
*Enzyme realization*

Dr P.J. Rogers – $10,100
*Structure and function of bacteriorhodopsin*

Professor R.L. Segall, Dr R.St.C. Smart and Dr P.S. Turner – $20,724
*An experimental approach to vibrational mix-up and vibrational redistribution in energized polyatomics*

Electronic and surface effects on the dissolution rates of ionic and semiconducting oxides

Dr M.C. Standage and Dr W.R. MacGillivray – $55,082
*A study of Rydberg atoms using transient spectroscopy and electron scattering*

Commonwealth Scientific and Industrial Research Organization/Griffith University Scholarship

Dr W.K. Busfield and Dr I.D. Jenkins – $16,000
*The mechanism of initiation in free radical polymerisation*

Ian Potter Foundation

Dr M.C. Standage – $1,000
*Travel Grant*

National Energy Research, Development and Demonstration Council

Dr I. Lowe – $37,796
*Australian energy demand, 1980-2030*

Professor R.L. Segall, Dr S. Myhra, Dr R.St.C. Smart and Dr P.S. Turner – $94,888 (1981-83)
*Evaluation of critical properties of SYNROC for disposal of high level radiation waste*

National Health and Medical Research Council

Dr G. Abraham – $18,664
*Characterization of bunyaviral RNAs*

Dr F.M. Clarke – $25,960
*Isolation and biochemical characterization of early pregnancy factor*

Dr F.M. Clarke – $23,819
*The realization of early pregnancy factor: its biology and clinical application*

Dr R.S. Holmes – $33,846
*Genetic analyses of enzymes of alcohol metabolism*

Professor C.J. Masters – $29,617
*Interactions between hypolipidaemic drugs and peroxisomal metabolism*

National Heart Foundation of Australia

Dr R.J. Willis – $15,930
*31P-NMR Study of the ischaemic myocardium*

National Science Foundation (US)/Department of Science and Technology (AUST)

Dr A.E.W. Knight – $9,500
*An experimental approach to vibrational mix-up and vibrational redistribution in energized polyatomics*
Queensland Cancer Fund
Dr R.J. Quinn and Dr I.D. Jenkins — $16,805
Analogues of mevalonate and isopentenyladenine as potential antineoplastic agents: suppression of cell proliferation with inhibitors of HMG CoA reductase

Radio Research Board
Dr D.V. Thiel — $800
Modification of phase locked loop performance using a sample and hold circuit
Dr D.V. Thiel — $1,500
Angle of arrival measurements at HF

Clive and Vera Ramaciotti Foundations
Dr M.G. Irving — $14,000
Separation of cell populations by centrifugal elutriation

Mary Thompson Fund
Dr D.E. Clegg — $1,358
Lead burden of young school children

University Research Grants
Dr F.M. Clarke — $3,300
Production of monoclonal antibodies to EPF
Dr J.F. Dobson — $2,500
Theory of surfaces
Dr P.C. Healy — $2,154
The structure and chemistry of nitrogen base adducts of copper I halides
Dr G.A. Hope — $7,811
Electrochemistry of transition metal silicides
Dr M.G. Irving — $2,400
Evaluation of NMR spectroscopy in monitoring the specificity and efficacy of liposome encapsulated chemotherapeutic cancer therapy
Dr R.J. Quinn — $7,000
Conformationally rigid barbiturates: a rational approach to drug design
Dr R.J. Quinn and Dr I.D. Jenkins — $1,500
Analogues of mevalonate and isopentenyladenine as potential antineoplastic agents: suppression of cell proliferation with inhibitors of HMG CoA reductase
Dr M.C. Standage — $3,000
Coherent optical transients and optical bistability in atomic systems
Dr M.C. Standage — $500
Computing assistance

Dr D.V. Thiel — $1,400
Development of a multifrequency surface impedance meter
Dr R.J. Willis — $3,134
NMR study of ischaemic myocardium

PUBLICATIONS

Chapters in Books


HEALY, P.C., SKELTON, B.W.* and WHITE, A.H.* “Structural studies in the iron(III)/chloride/a,a'-diimine system. III Crystal structures of Tris (2,2'-bipyridine) iron(II))-Oxo-bis [trichloroferrate(III)] and of ‘Compound A’, chloride solvate”. Aust J. Chem. 36: 2057-64, 1983.


HOPE, G.A., FAN, F-R.F.* and BARD, A.J.* “Photoelectron spectroscopic determination of the structure of thin platinum silicide layers formed on Si (100) and Si (111) for use as electrodes”. Journal of Electrochemical Society 130: 1488-1491, 1983.


McCABE, M.*, MAGUIRE, D.J. and NOWAK, M.* “The effect of arsenic compounds on human


THIEL, D.V. and CHANT, I.J.* "Reply to discussion of ionospheric induced very low-frequency electric field wave tilt changes". Geophysics 47: 1699-1700, 1983.

Conferences Papers and Proceedings


ALGAR, E., SEELEY, T.L. and HOLMES, R.S. "Purification and molecular properties of mouse alcohol dehydrogenase isozymes". Annual Conference of the Australian Biochemical Society in Brisbane, 1983.


BUSFIELD, W.K. and MORLEY-BUCHANAN, T.* "Detailed study of the post gamma radiation grafting of 1,3-butadiene to isotactic polypropylene". IUPAC Macromolecular Conference, Bucharest, 1983.

CLARKE, F.M., WILSON, M.S. and MCCARTHY, R.E. "In search of early pregnancy factor". J. Reproductive Immunology, Suppl. 61, 1983.

CLARKE, F.M., WILSON, M.S. and MCCARTHY, R.E. "In search of early pregnancy factor". J. Reproductive Immunology, Suppl. 61, 1983.


CLEGG, D.E., ROBERTS, G.S.* and RZECKI, G.* "Estimation of residue levels of promacyl in beef tissues and fat by HPLC (EC)". International Conference in Detectors and Chromatography, Melbourne, 1983.


HOLMES, R.S. "Biochemical genetics of enzymes of ethanol metabolism". Paper presented as part of a Symposium on Mammalian alcohol metabolism at the Annual Conference of the Australian Biochemical Society, Brisbane, 1983.


KNIGHT, A.E.W. “Rotational involvement in intramolecular vibrational redistribution”. Invited paper at the NATO Workshop on Primary Photophysical Processes, Herrsching, West Germany, 1983.


LOWE, I. “The importance of tenure to academic standards”. Invited paper to HERDSA Annual Conference, Brisbane, 1983.


SCHOOL OF SOCIAL AND INDUSTRIAL ADMINISTRATION

The School's research activities gathered further momentum during 1983. There occurred, for example, a considerable increase in both the number of research projects initiated or underway, as well as in the size and quality of published research output. The range of research content being pursued is reflective of the School's broadly-based approach to the study of administration, while the array of different journals including contributions from staff members provides some indication as to the School's multi-disciplinary strengths. The research profile of the School has been assisted, too, by the purchase of its own digital PDP-11/23 computer, and by access to the I.P. Sharpe international data base. The School's contingent of postgraduate research students now stands at 17, and the acquisition of two further professorial appointments and a number of other senior faculty ones, is likely to augment the postgraduate research population over the next few years.

RESEARCH PROJECTS AND ACTIVITIES

Staff

Dr P.A. Bailes

Development of G-String: an extensible applicative programming language for string processing

Most common computer languages are designed for efficiency of execution on current computer hardware. This project explores the applicative (or functional) model, in which the prime criterion is mathematical simplicity, which implies simplicity for the users of such languages (e.g. the programmer). Particular attention is paid to how mechanisms which allow the extension of the language, in accord with current trends in programming methodology, may be defined simply. A particular application area used to test the extension mechanisms is that of string processing (i.e. that of syntactic definition and analysis). A prototype language, Strip (for String Processing) is being refined into G-String (for Griffith University String Processing Language).

Implementation of G-String

Part of the development of G-String (see above) involves the definition of a minimal base language (called GO) supporting unrestricted facilities for its own extension, so that ultimately, any G-String program is actually a program in GO. This project investigates the efficient interpretation of GO programs according to various abstract criteria, with the possiblility that the GO language may itself be simplified.
Implementation of guarded commands
An important aspect of current work in program synthesis and verification focuses upon the language, or derivatives thereof, introduced by E.W. Dijkstra in the book "A Discipline of Programming". (Prentice-Hall, 1976.) Implementation of this language poses three major problems: (a) how may the language's require-ment for non-deterministic selection of alternative execution paths be represented; (b) how may "flexible" arrays be implemented efficiently; (c) how may the correct access to variables according to the scope rules of the language be checked statically.

Development of a rational Pascal
Most common computer languages incorporate restrictions on how programs may be expressed to ensure that the programs may be efficiently executed on current computer hardware. Accepting that this restriction may have validity (though see above), there remains less reason for a language imposing a syntax which facilitates machine analysis rather than human comprehension. This project aims to take the semantics of the popular teaching language Pascal and provide a simpler syntax for them; so that the problems of introductory programming students may be ameliorated.

Development of a Coroutine Package for C
Coroutines are programming language constructs which facilitate the expression of a procedural program as a number of modules executing in quasi-parallel. This project involves the extension of C in the most economical and simplest manner to provide coroutines.

Cataloguing and accessing wine tasting information
The diversity of wine labelling and description leads one to categorise wines and associated tasting information by the broadest criteria, in each of which there is considerable variation. Currently underway is evaluation and assessment of a system which accesses a wine-tasting data base by selecting records on the basis of certain of their designated fields being matched by given regular expressions. This system is being generalised to provide software for the easy definition of similar systems, such as an "address-book" data base.

S.R. Bell
Distribution politics and the evolving crisis of liberal capitalism
Taking the United States as a paradigm this work seeks to explore the rise and recent decline of the politics of growth as a surrogate for redistribution. Current reactions and the implications for distributive politics and the left are explored.

S.R. Bell and Dr K.J. Walker
The philosophy of panic: a critique of 'neo-scarcity' theory

The view that authoritarian politics is an unavoidable accompaniment of a constrained growth future has become an influential one in ecological political theory. The authoritarian prescription of neo-scarcity theory has attracted wide-spread criticism. The present work attempts to unpack and criticise the theory itself; particularly its liberal roots and its treatment of the problem of collective goods.

S.R. Bell
Corporate power and American reform liberalism
Corporate power has long been criticised by American liberal reformers. This work is a critique of the liberal approach on the grounds that the intellectual foundations of liberalism are inadequate to the task.

P.J. Booth and Dr K.J. Moores
The congruence of objectives and policies and implications for assessing organisational effectiveness: the case of sheltered workshops
The assessment of the effectiveness of not-for-profit organisations is a topic of growing concern. One method of effectiveness assessment relies on the comparison of organisational activities with externally imposed policies. The necessary criteria for the success of this method are examined with emphasis on the need for a match between organisational objectives and external policies. Sheltered employment is used as an illustrative example of a case where this matching does not always exist.

Costing and pricing in sheltered workshops
The aim of this project is to prepare a detailed set of guidelines on costing and pricing in sheltered workshops. The guidelines are being developed in a modular format to cater for the diverse range of activities carried out by sheltered workshops and are written for managers with no previous experience. The research has mainly involved examination of the nature of sheltered workshop management and the existing costing and pricing practice.

P.J. Booth
Financial management in not-for-profit organisations
The financial affairs of not-for-profit organisations have been increasingly of concern to governments and the general public. This concern arises from the accountability relationship resulting from the use of public funds by many such organisations. This project examines the factors that can be used to group not-for-profit organisations, e.g. size, funding source, into common types and the financial management systems successful for each type.

D.T. Chinchen
An analysis of the determinants of the forms and extent of exploratory behaviour undertaken in retail environments
Exploratory behaviour as it applies in retail environments has been conceptualised as
occuring in four forms: (1) comparison, (2) search, (3) specific exploration and (4) diverusive exploration. The independent variables hypothesized to explain the extent of each behaviour are: (1) optimal stimulation level, (the degree to which individuals actively seek sensory stimulation), (2) perceived information rate, (the level of stimulation present in the retail environment). All variables are calculated as indexes and are analysed across three retail settings using structural equation analysis. Initial results suggest that there are significant differences in the extent to which individuals engage in the various forms of exploratory behaviour and that these differences can be explained in part by the independent variables in the conceptualised model.

Dr O.P. Coaldrake
Administrative and Parliamentary reform in Queensland
Research has taken place on the relationship between Parliament and the executive during the Bjelke-Petersen premiership. This work has resulted in a chapter in a book on the Bjelke-Petersen premiership. The investigator has been awarded an ARGS grant (for 1984) to allow continuation of research work on administrative and Parliamentary reform.

N. Cocks
Human information processing and information overload
This study seeks to explore the effects on decision-making performance of varying information loads. These loads are manipulated by varying the complexity of the sets of information used by decision makers. The results indicate that generally speaking, the higher the complexity of information the lower the decision accuracy. However, the effect of this complexity on other dimensions of performance are less than clear.

N. Cocks and R.P. McNamara
Venture financing
Venture financing is an area that has attracted significant attention from both State and Federal Governments. The basic premise that has emerged is that the Australian Capital Market is inefficient in evaluating/funding ventures, and that intervention is desirable. This research seeks to identify extant practices in such evaluations and relate these to a capital market theoretical framework. The dimensions of such a framework have proved both complex and elusive. Thus the research is continuing, so as to further develop this framework.

W.E. Cundiff
Telematics policy in Australia
Several events and trends of the 1980s signal the beginning of a long battle involving State and Federal Governments and the buyers and sellers of rapidly converging computer, communications and electronic media technologies. Options in the formation of public policy are explored here vis a vis the changing regulatory objectives confronting technological change. Areas examined include, inter alia, the impact of the Davidson recommendation, the controlling role of Telecom and other organisations such as the Overseas Telecommunications Commission and Aussat in the management and provision of advanced data communications facilities, the future of CATV and RSTV services and emerging issues in the transnational flow of computer data.

The modelling mystique
Numerous contrasting views are evident regarding the use and usefulness of computer models in organisational planning and policy analysis. While the field of modelling has itself been the subject of much criticism, no approach other than System Dynamics has captured the polarisation of thoughts so dramatically. An eclectic mode of research is applied here to study the inner workings of System Dynamics with a view to maintaining an objective critical appraisal of the approach. Topics so far developed are "Model Integration and Algorithmic Transparency in APL" and "On the Contribution of General Purpose Languages and Microcomputers to the System Dynamics Methodology". Two articles emanating from the project have been accepted for journal publication in 1984.

Dr H.J. Cunnington, P.J. Booth and R.P. McNamara
The social responsibility of the Australian corporation
This project which is being carried out in conjunction with the Australian Institute of Management aims to find out: the way managers conceptualise socially responsible behaviour; what role do ethics play in corporate decision making; what factors influence attitudes of managers towards social responsibility; do managers support the concept of shareholder theory, ie. that corporations are set up to pursue a plurality of interests and not only those of their shareholders. Data have been collected and await analysis.

Dr H.J. Cunnington
The managerial implication of robotics
This study is being jointly carried out with the Department of Science and Technology. The objectives of this research are to determine: managerial motivations for using robotics; managerial perceptions of major positive and negative impacts of robots; what impact does the installation of robots have upon working methods and employees. Data are currently being collected.

Dr H.J. Cunnington and V. Dobinson
The teaching of Industrial Relations
This study is being jointly funded by the School
of Social and Industrial Administration and the Department of Management at the University of Queensland. Its purpose is to obtain the opinions of academics specializing in industrial relations concerning the teaching of industrial relations and current topical industrial relations issues. Data collected and await analysis.

Dr H.J. Cunnington
*People for Nuclear Disarmament*

The purpose of this research is to examine the patterns of growth and evolution of a social organisation which is expanding rapidly. A questionnaire has now been pilot tested.

R.H. Dagwell and K. Leo*
*Consolidation concepts used in annual reports*

The aim of this project is to identify which consolidated concepts are used by both accountants in public companies and the auditors who audit their financial statements. The concepts being empirically validated in this study were identified and examined in previous articles published by Dagwell and Leo.

R.H. Dagwell and K. Leo*
*Alternative concepts of the group within consolidated statements*

A review and analysis of the three generally accepted concepts of the economic group of companies for which consolidated statements are prepared. Each concept is shown to have its place and is dependent on the informational requirements of users.

R.H. Dagwell and D.B. Margetson
*An Internship Programme within an undergraduate degree*

This study is a review of the SIA Internship Programme drawing comparisons with other administration degrees. The second part of this study will compare U.K. Internship Programmes with SIA's.

R.H. Dagwell, Dr P.B. Trevor-Roberts and G. Osborne*
*Analysing and managing labour turnover — an organisational study*

An analysis of labour turnover in a large manufacturing plant in Queensland. Questionnaires were administered to both line and staff groups. An attempt was also made to cost the calculated labour turnover.

R.A. Dommett
*Strategy development based on a benchmark market segmentation analysis of an industrial products market*

The project integrates the theory and practice of market segmentation into the development of a corporate model for the assessment of the impact of strategic policy scenarios relevant to the organisation's marketing activities. This enables a quantitative analysis in terms of revenue and profit of the outcome of Marketing Policy Options based on a detailed analysis of the organisation's Invoice Data Base.

Development of predictive models of market segment profitability using Log-Linear modelling methods

This project explores the application of Log-Linear modelling methods to developing predictive models of market segment profitability and revenue performance. The bases of segmentation used being *a priori* and based on senior management's strategic policy decision rules.

Modelling market structure in an industrial products market

This project uses various modelling methods to describe customer profiles in a complex Industrial Products Market. The profiles are developed using various bases including customer size, profitability and revenue contribution. Similarities and dissimilarities among profiles for different market segments are the subject of further investigation.

A.J. Fitzgibbons
*Keynes social and political theories*

This is a study of the social and political thought of one of the most influential of economists. It analyses the derivation of Keynes' general philosophy, and draws comparisons between the views of Keynes and those of his followers.

A.J. Fitzgibbons and Dr I. Lowe
*The uranium decision*

This is an analysis of the dimensions of the uranium dispute in Australia. It researches the international market for uranium, the degree of Australian influence upon the market, the economic gains from the mining of uranium, the nonproliferation policies of Australia and the US influence, and the problem of waste disposal.

Dr N.J. Hathaway
*An empirical analysis of Brisbane crime statistics*

An econometric model has been developed to explain the generation of various criminal offence rates and police productivity in solving these offences. A cross-sectional analysis has been undertaken over the 40 police divisions in and around the Brisbane metropolitan region, using 1981 data. The crimes analysed included assault, robbery, sexual offences, break and entering, malicious damage, stealing and false pretences.

Dr N.J. Hathaway, Dr A. Payne* and Professor J.A. Rickard
*Option pricing models*

Recent study of the movement of security prices has established that preconceived assumptions have been deficient. As option pricing models rely heavily on such assumptions these are being redeveloped to account for these recent discoveries, particularly in relation to share price volatilities.

Option market indices

An option market has many similarities with a standard share market. As such, a need exists
for a market index, as found in a share market. This index enables comparisons to be made between the options on an objective basis. The performance of an option can then be regarded as a market-related component and an individual component. Technical difficulties arise as there are many options usually available for any one stock. Also, unlike shares, options are wasting assets. Practical estimation problems arise due to the thin trading nature of the Australian market. A data base of shares and options prices on the Australian Options Market has been prepared. A theoretical comparison of indices has been completed. The realisation of this in terms of empirical comparisons of various indices is underway.

Dr N.J. Hathaway, Professor J.A. Rickard and Dr I. Woods* Grossed-up net yield to redemption as an approximation to the gross yield to redemption In the market for fixed-interest securities, several variants of the yield to redemption (YTR) concept are used. The YTR of a stock is simply the internal rate of return which the holder can expect to receive if he/she holds the stock until maturity. Since income tax has to be paid by some, if not all, investors on the interest received, and in some cases on capital gain as well, a distinction is made between the gross YTR and the net YTR. Apart from the gross and net YTR, a third yield measure, the grossed-up net YTR, is used. The grossed-up net YTR is often used as an approximation to the gross YTR, although the precise relationship between these two yields is often poorly understood. An asymptotic approximation for the grossed-up net YTR in terms of the gross YTR has been developed. The approximation provides good estimates of the grossed-up net YTR given the gross YTR and relevant bond parameters.

Dr N.J. Hathaway and Dr A. Payne* Volatility estimation The time variation of share price volatility has been further investigated. Statistical models that allow for this time varying behaviour have been investigated. An extensive data base of daily share prices (for those shares with traded options) has been undergoing development.

P. Kingsley*, Dr P.B. Trevor-Roberts and R.H. Dagwell Developing a performance appraisal programme – an organisational study Questionnaires were sent to various managers in a leading retailing organisation to develop an appraisal system. The Delphi Technique was used to develop a participation system rather than an imposed management system.

Professor D.C. Limerick, Dr P.B. Trevor-Roberts and Dr H.J. Cunnington Strategies and competencies for organisational excellence in Australian organisations A study of concepts of excellence amongst leading Australian business and public organisations, and of the strategies being used in pursuit of those objectives.

Professor D.C. Limerick and L. Pieper* Mission and management A study of the objectives of the Uniting Church, Queensland, and of structural redesign aimed at achieving these objectives.

Dr J. McCallum, Professor H. Henry* et al Andrew Norman Institute for Advanced Study in Gerontology and Geriatrics Project “Age, Health and Work” This study, which examines age and health in a competitive work culture, argues a case for the positive health effects of a socially supportive work culture compared to an individualistic, competitive culture. Evidence from cross cultural epidemiology (USA vs Japan) and intro-USA comparisons was used to support the case.

Dr K.J. Moores and Professor C. Tomkins* Transfer pricing revisited: lessons from an everyday life of the accountant Transfer pricing theory and practice has been the subject of a number of studies and the recommended solutions and interpretations have ranged from those based on economic optimisation to those which rely upon an understanding of certain behavioural relationships. However, under certain conditions these formulations are inadequate as explanations of everyday practice. The purpose of this study is to establish the “transfer pricing behaviour” of a sample of companies and to relate such behaviour to a simplified model which takes account of both economic and behavioural considerations.

Dr I. Oliver Mutual understanding This ongoing project is concerned with the development of methodologies for assessing adequacy of communication in human relationships.

Dr M.G. Quinlan New technology and occupational health An investigation of some of the occupational hazards associated with technological innovation and an assessment of the implications of this for industrial relations. Resulting paper to be published in 1984.

Industrial organisation and action in Australia 1830–1850 An investigation of early Australian unionism and collective action by workers.

Monopoly employer, the state and industrial conflict: managerial strategy in the Australian steel industry A study of the origins and implications of BHP’s industrial relations strategy, prepared for book of critical essays on Australian industrial relations.
Dr M.G. Quinlan and C. Lever-Tracy*
A divided working class? Ethnic segmentation and industrial struggle in Australia
A joint study of the implications of the ethnic segmentation of the Australian working class after World War II focussing on whether this segmentation has similarly divided industrial struggles. The study is being prepared as a book.

Dr M.G. Quinlan and D. Plowman*
Conflict resolution in Australia
A general paper and two case studies on the patterns and resolution of conflict in Australia. The case studies deal with one public sector organisation (Australia Post) and one private sector organisation (Australian Iron and Steel).

Professor J.A. Rickard, Dr N.J. Hathaway, Professor T. Howroyd*, and A. Russell*
Models of oligopolistic competition
Members of the group continued their research into various mathematical models of oligopolistic competition. Specific problems which have received attention include: the stability of the solution to the Cournot, Stackelberg and related oligopoly problems; the Cournot problem with allowance for adjustment costs, variation of cost and demand functions over time and the effects of lags in information receipt and policy implementation on stability; the behaviour of warring duopolists, extending the seminal work of Robert Bishop.

Professor J.A. Rickard, Dr K.J. Moores and R.P. McNamara
Variable amortisation schedules
The group continued their evaluation of conventional loan repayment schedules with a view to highlighting certain implications which affect both borrower and lender. These implications for risk, cash-flow patterns, cost, burden and the debt/equity composition at any one time, are then considered in the context of an alternative scheme by a variable amortisation schedule.

Professor J.A. Rickard, Dr N.J. Hathaway, Dr A. Russell*, H. Stanton* and Dr M. Jackson*
The structure and true cost of consumer finance in Australia and the United Kingdom
Earlier work in this area has continued with particular attention being given during 1983 to the following areas: interest in advance; the legal definition(s) of rate of interest; commercial bill finance; rested interest; mortgage interest relief at source (MIRAS) as now offered by U.K. Building Societies.

Professor J.A. Rickard, Dr A. Russell* and Professor T. Howroyd*
Mathematical models and tax evasion and tax avoidance
This project originally considered mathematical models of tax evasion. Discrete models have been analysed, when evasion had occurred over a period of several years. Allowance is made for growth in income, investment of illicit gains from successful tax evasion, and retroactive penalties. Prohibitive penalty rates have been determined. The formulation and conclusions are relevant to the current Australian taxation scheme. During 1983 the work has been further generalised and extended. Policy implications of the results are being investigated.

Professor J.A. Rickard
The role of import tariffs, consumption taxes and profit taxes when an importable product is supplied by a foreign monopoly
This work began during 1983 and received considerable attention during the period of Professor Rickard's leave at the London Business School. The work extends the analysis of Katrak (Oxford Economic Papers, 1977) and should be regarded as an extension of tariff theory.

D.M. Smith
A case study in social administration — The Rotaract Club of North Sydney and Rotaract District 968
An interdisciplinary case study in social administration used in the Social Administration course in the School in 1983. It presents students with problems requiring the consideration of the following areas of knowledge — accounting, auditing, marketing, human conflict resolution, law, and organisation logistics.

When is trading stock on hand for income tax purposes
For a trading or manufacturing firm, the trading stock figure has significant impact. Section 28 of the Income Tax Assessment Act 1936 requires the valuation of "stock on hand". This paper engages in an indepth study of the Australian and United Kingdom case law in the area in an attempt to find an underlying principle. The second part of the paper considers the recent Federal Court decision in the case of the Commissioner of Taxation versus Suttons Motors (14 ATR 262) and explores an alternate rationale for the decision based on the general principle developed in the first part of the paper.

Administrative Law remedies and the Commissioner of Taxation
The provisions of the Income Tax Assessment Act give limited rights of appeal and there is no remedy if the Commission fails or refuses to issue an assessment. This paper considers the Common Law remedies (as prescribed under Section 75(v) of the Federal Constitution) of mandamus prohibition and injunction. The paper also considers the tort of abuse of public office in respect to the assessment process.

G.T. Steadman, R.H. Dagwell and N. Cocks
Accounting for administrators
A textbook entitled "Accounting for Administrators" and used by students in the
School of Social and Industrial Administration was updated and five new chapters added.

Dr P.B. Trevor-Roberts
An audit of personnel management activities in Queensland
An audit of the personnel functions and activities of 87 Queensland organisations was undertaken. The size, type of organisation and a separate personnel department was analysed to determine the impact this had on the number of personnel activities performed. Personnel ratios and personnel cost per employee in Queensland organisations were compared with overseas data.

J.T. Wilkinson
Multi-criteria analysis: a case study
The aim of this project is to apply a model of multi-criteria analysis to the tourism industry. The focus of the study is Stradbroke Island. Survey data has been obtained on the proposed bridge to link Stradbroke Island with the mainland. The survey has included both economic and non-economic data and it is hoped that using multi-criteria analysis, some sort of priority ranking can be generated to give the decision makers a base on which to make economic decisions where the interests of different parties conflict and non-economic variables are considered in the ranking process.

Postgraduate Students

Y. Bain (MPhil) – Innovation in Commonwealth post compulsory educational policy and the labour market implications

P. Booth (PhD) – Financial control as an integral part of organisational control in not-for-profit organisations

D. Butler (PhD) – The impact of technology on the secretarial world and the implications of this for commercial education

B. Cameron (PhD) – The dimensions of effectiveness of tertiary institutions in Queensland

R. Dagwell (PhD) – Consolidation theory and practice

E. Gillies (MPhil) – Organisation decision making structure as it relates to employee participation

I. Griffiths (PhD) – Organisational context and structure and women in management

R. Jones (MPhil) – Evaluation of the learning/teaching theory underlining the popular approaches to teaching

D. Lodder (MPhil) – Alternative work patterns

P. McCarthy (PhD) – The role of science in management theory

E. McNamara (MPhil) – Management attitudes towards lifelong education

J. Ross (MPhil) – A comparative study of the application of organisation theory and organisation development in corporations operating in Australia and Indonesia, as observed in terms of impact on managers within these corporations

W. Shepherd (PhD) – Monetary management in financially interdependent economies: the Australian experience

J. Smith (PhD) – Diffusion of alternative technologies

P. Sutcliff (PhD) – Management styles

N. Timo (MPhil) – Trade union strategies in the context of technological changes

C. Trimarchi (MPhil) – Application of computer-assisted business management

1983 RESEARCH AWARDS
Australian Institute of Management
Professor D.C. Limerick, Dr P.B. Trevor-Roberts, Dr H.J. Cunnington – $5,000
Strategies and competencies for organisational excellence in Australian organisations

Carnegie Foundation
Dr J. McCallum – $500
Values and an ageing society

Department of Social Security
P.J. Booth and Dr K.J. Moores – $10,000
Guidelines for costing and pricing in sheltered workshops

Griffith University Research Grant
P.J. Booth and Dr K.J. Moores – $1,120
Market risk and human resource data disclosure

Salisbury Rotary
Dr J. McCallum – $500
Travel Grant

Salzburg Seminar
Dr J. McCallum – $2,500
Health, productivity and ageing

PUBLICATIONS

Books

Chapters in Books


McCALLUM, J. “Retirement problems and communication treatment”. In New Directions in pre-retirement education. Stoke on Trent, BethJohnson Foundation, 1983, pp.76-96.


Journal Articles


CUNNINGTON, H.J. “What role can engineers play in industrial relations?”. Transactions of the Institute of Engineers Australia GE7: 2, 56-63, 1983.


MOORES, K.J. “The games people play now are the budgeting way now . . .”. Accounting Forum 6: 2, 39-52, 1983.


OLIVER, I. “What is the level of mutual understanding in your organisation?”. Resource 3, 1-2, 1983.

RICKARD, J.A. “Mortgage calculations: all you need is a pencil and ruler”. Accountancy 94, 125-130, 1983.


Conference Papers and Proceedings


Reports and Other Publications


CENTRE FOR THE ADVANCEMENT OF LEARNING AND TEACHING

The policy of the Centre is to undertake research mainly of a topical action-related nature arising out of the demands of the University for information on specific academic issues or relating to the assistance given to the Schools in evaluating courses and programmes.

RESEARCH PROJECTS AND ACTIVITIES

Staff

I.H. Barham
Curriculum design; assessment, course and programme review, evaluation and redesign; institutional review.

M.M. Buckridge
Preparation and evaluation of written teaching material; educational problems of women.

R.C. Landbeck
Evaluation; the development of student study skills; student learning strategies; adult learning; problems facing part-time students; small group teaching strategies; independent or self-directed study.

D.B. Margetson
The nature of disciplines, integration and problem-orientation in the context of curriculum design and evaluation processes, and the
relation of this to particular dimensions of education.

Dr R.A. Ross
Course design, particularly for interdisciplinary courses, and including external studies courses; course evaluation, and use of evaluation information in course redesign; the impact of institutional structures on academic programmes.

Dr O.D. Zuber-Skerritt
Action research in higher education; student study skills; evaluation of teaching; curriculum development and review; translation science; comparative drama.

PUBLICATIONS

Chapters in Books

Journal Articles


Papers and Proceedings


Reports and Other Publications


PUBLICATIONS BY STAFF OF OTHER DIVISIONS

LIBRARY

Books/Pamphlets
CAMPBELL, M.B.M. Reference and information sources in chemistry and biochemistry. 2nd edn. (Griffith Library Guides No. 5) Brisbane, Griffith University Library, 1983.

CAMPBELL, M.B.M. References and information sources in mathematics and physics. 2nd edn. (Griffith Library Guides No. 6) Brisbane, Griffith University Library, 1983.

SECRETARIAT

Conference Papers and Proceedings

Printed by Poly-Graphics Pty Ltd.
THE STAFF

In 1983, the number of full-time and part-time staff members totalled 565, comprising 229 faculty staff and 336 professional, technical and other general staff.

Training and Development

Training programmes for University staff increased in number and variety. The Training and Development Advisory Committee assumed a greater role in the task of appraising and analysing the development and training needs of general staff, and faculty staff likely to be involved in administrative functions. During the year, a total of 175 general staff members participated in internal and external training and development programmes, and 72 new staff took part in staff orientation programmes.

Staff Absences on Outside Studies Programmes (OSPRO)

During 1983, 144 faculty staff members were eligible to undertake Outside Studies Programmes (OSPRO). Twenty-eight of these were sent on detachments from the University and were absent for an average period of 4.57 months. The cumulative total of OSPRO absences amounted to 128.0 months or 7.5% of the available time of staff of the grade of lecturer and above. All Outside Studies Programmes taken in 1983 were concerned with research, and all but three were taken overseas. Details of absences by staff are set out in the tables at the end of this report.

Industrial Matters

From January 1983, the University was subject to the Commonwealth Salaries and Wages Pause Act, and later in the year the National Wage decision, with its associated set of principles, flowed to State Awards controlled by the State Industrial Commission. During this time, there was increased activity by Trade Unions in proposing changes to non-salary aspects of the University Employees (General Staff) Award - State. A revised log of claims was received from the Unions and a new round of negotiations commenced. The three universities that are a party to the Award have also submitted proposals for changes to the Award; proposals which arise out of the first three years of experience by the unions and the universities in operating under a single composite Award.

A High Court decision in the "Social Workers" case (1983) considerably broadened the range of callings and occupations that could be regarded as industrial pursuits for the purpose of registration in the Commonwealth Conciliation and Arbitration Commission. The University awaits decisions of the Commission on test applications for registration, the results of which may have far reaching consequences for negotiations at both state and federal level.

During 1983, the Federation of Australian University Staff Associations sought registration as the Australian Association of University Staff, as a union of employees under the Commonwealth Conciliation and Arbitration Act. Moves were also made by the governing bodies of universities to form an organisation known as the Australian Universities Industrial Association.

Honorary Fellows of the University during 1983

School of Australian Environmental Studies

W. H. Butler, CBE – Conservation Consultant
Dr W. Dalil, PhD DSc Qld. – Officer in Charge, Northeastern Regional Laboratories, CSIRO
Dr B. S. Niven, BSc S.A., MSc Witw., PhD Adel. – Mathematical Statistician
Dr J. A. Redfield, BA BSc Wyoming, PhD Alta. – Research Scientist, Division of Fisheries and Oceanography, CSIRO
Dr L. J. Webb, MSc PhD Qld. Senior Principal Research Scientist, Rainforest Ecology Unit, CSIRO
Dr Y. Tsubaki, DSc Kyushu – Research Associate, Nagoya University

School of Science

Dr A. F. Egan, MSc Syd., PhD Mela. – Principal Research Scientist, Division of Food Research, CSIRO
Dr D. J. W. Moriarty, BAppSc PhD Adel. – Senior Research Scientist, Division of Oceanography, CSIRO
F. Warren, BSc Lix. – Science Teacher
S. Key, MA Camb. – Language Teacher

THE ART COLLECTION

The University Art Collection now includes over 400 paintings, drawings, prints, collages, photographs and sculptures, mainly by contemporary Australian artists. During 1983, thirty-nine works of art were purchased, mainly in the graphics area (etchings, screen prints, lithographs, linocuts, woodcuts). Included in these purchases was the acquisition of four works - by the artists Suzanne Archer, Peter Booth, Robert Kinder and Gareth Sansom - with assistance from the Visual Arts Board. The University was also grateful to accept the donation of three Japanese scrolls presented to the Vice-Chancellor on behalf of the University by the Daito Bunka University in Tokyo, and one Japanese scroll by the calligrapher, Misa Mochizuki.

During the year, works from the University's collection were borrowed by the Darling Downs Institute of Advanced Education, the Art Gallery of New South Wales for its "Perspecta '83" exhibition, and for the exhibition "Integrating..."
Art, Science and Technology” which was jointly organised by ANZAAS, the Royal Society of Queensland and the Queensland College of Art. An exhibition consisting of thirteen works from the Collection, was mounted in the foyer of the Central Theatres in August 1983 as part of the University’s Open Day activities.

THE UNIVERSITY SITE

Griffith University’s site of 175 hectares of bushland adjacent to the Toohey Forest Park requires careful maintenance, and the integration of new buildings into such a sensitive and special environment is a matter of particular concern to the University. The range of minor works, alterations, and site works undertaken for that purpose during 1983 totalled over $1M. One particular building activity which has had a significant effect on the social life of the University was the fitting out of the University Club which opened during 1983. This event was welcomed by both staff and students. The Club provides a focal point for informal discussion among all members of the University community as well as providing a venue for various social events.

Landscaping and refurbishment of the area around the Fifth School Building was completed in 1983.
## STUDENT STATISTICS AT 30 APRIL 1983
### ENROLMENTS IN UNIVERSITY PROGRAMMES

<table>
<thead>
<tr>
<th>School</th>
<th>Programme</th>
<th>Full-Time Male</th>
<th>Full-Time Female</th>
<th>Part-Time Male</th>
<th>Part-Time Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Environmental Studies</td>
<td>Undergraduate and Honours</td>
<td>188</td>
<td>129</td>
<td>156</td>
<td>57</td>
<td>530</td>
</tr>
<tr>
<td></td>
<td>Postgraduate coursework</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Postgraduate research</td>
<td>24</td>
<td>7</td>
<td>28</td>
<td>2</td>
<td>61</td>
</tr>
<tr>
<td>Humanities</td>
<td>Undergraduate and Honours</td>
<td>122</td>
<td>253</td>
<td>73</td>
<td>166</td>
<td>614</td>
</tr>
<tr>
<td></td>
<td>Postgraduate research</td>
<td>4</td>
<td>2</td>
<td>12</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>Modern Asian Studies</td>
<td>Undergraduate and Honours</td>
<td>116</td>
<td>165</td>
<td>76</td>
<td>109</td>
<td>466</td>
</tr>
<tr>
<td></td>
<td>Postgraduate coursework</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Postgraduate research</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>Science</td>
<td>Undergraduate and Honours</td>
<td>170</td>
<td>96</td>
<td>27</td>
<td>11</td>
<td>304</td>
</tr>
<tr>
<td></td>
<td>Postgraduate coursework</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Postgraduate research</td>
<td>23</td>
<td>6</td>
<td>17</td>
<td>1</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>Postgraduate diploma</td>
<td>2</td>
<td>7</td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Social and Industrial Administration</td>
<td>Undergraduate and Honours</td>
<td>190</td>
<td>146</td>
<td>231</td>
<td>92</td>
<td>659</td>
</tr>
<tr>
<td></td>
<td>Postgraduate research</td>
<td>2</td>
<td>2</td>
<td>9</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Centre for the Advancement of Learning and Teaching</td>
<td>Postgraduate research</td>
<td>–</td>
<td>–</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td></td>
<td>6</td>
<td>5</td>
<td>33</td>
<td>44</td>
<td>88</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>857</td>
<td>825</td>
<td>704</td>
<td>512</td>
<td>2898</td>
</tr>
</tbody>
</table>

## AGES OF ENROLLED STUDENTS – 1983

<table>
<thead>
<tr>
<th>Age at 31 December 1983</th>
<th>Higher Degree</th>
<th>Other than Higher Degree</th>
<th>All Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Under 17</td>
<td>–</td>
<td>–</td>
<td>11</td>
</tr>
<tr>
<td>17</td>
<td>–</td>
<td>–</td>
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<td>18</td>
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<td>–</td>
<td>143</td>
</tr>
<tr>
<td>20</td>
<td>1</td>
<td>–</td>
<td>115</td>
</tr>
<tr>
<td>21</td>
<td>–</td>
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<td>77</td>
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<tr>
<td>22</td>
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<td>25</td>
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<td>4</td>
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<td>26</td>
<td>6</td>
<td>2</td>
<td>39</td>
</tr>
<tr>
<td>27</td>
<td>3</td>
<td>1</td>
<td>33</td>
</tr>
<tr>
<td>28</td>
<td>5</td>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td>29</td>
<td>16</td>
<td>3</td>
<td>31</td>
</tr>
<tr>
<td>30-39</td>
<td>66</td>
<td>22</td>
<td>235</td>
</tr>
<tr>
<td>40-49</td>
<td>26</td>
<td>12</td>
<td>83</td>
</tr>
<tr>
<td>50-64</td>
<td>10</td>
<td>5</td>
<td>51</td>
</tr>
<tr>
<td>Over 64</td>
<td>–</td>
<td>–</td>
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</tr>
<tr>
<td>Not Stated</td>
<td>–</td>
<td>–</td>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>171</td>
<td>57</td>
<td>1,363</td>
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</table>
### NUMBERS OF GRADUATES OR PERSONS QUALIFIED TO GRADUATE TO DECEMBER 1983

<table>
<thead>
<tr>
<th>School/Centre</th>
<th>Bachelor's Degrees</th>
<th>Bachelor's Degrees with Honours</th>
<th>Post-Graduate Diplomas</th>
<th>Coursework Master's Degrees</th>
<th>Research Master's and Doctor's Degrees</th>
<th>Total Graduates</th>
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<tbody>
<tr>
<td>Australian Environmental Studies</td>
<td>476</td>
<td>84</td>
<td>–</td>
<td>60</td>
<td>13</td>
<td>633</td>
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<tr>
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<td>3</td>
<td>611</td>
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<tr>
<td>Modern Asian Studies</td>
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<td>–</td>
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<td>441</td>
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<tr>
<td>Science</td>
<td>333</td>
<td>70</td>
<td>7</td>
<td>28</td>
<td>20</td>
<td>458</td>
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<tr>
<td>Social and Industrial Administration</td>
<td>116</td>
<td>7</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>123</td>
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<td>–</td>
<td>–</td>
<td>–</td>
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<td>2</td>
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<tr>
<td><strong>TOTALS</strong></td>
<td><strong>1886</strong></td>
<td><strong>241</strong></td>
<td><strong>7</strong></td>
<td><strong>91</strong></td>
<td><strong>43</strong></td>
<td><strong>2268</strong></td>
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</table>
# ENROLLED STUDENTS 1975–83
## AT 30 APRIL EACH YEAR

<table>
<thead>
<tr>
<th>SCHOOL/CENTRE</th>
<th>YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Environmental Studies</td>
<td>117 234 336 440 454 554 620 554 615</td>
</tr>
<tr>
<td>Humanities</td>
<td>126 223 334 463 491 508 521 491 662</td>
</tr>
<tr>
<td>Modern Asian Studies</td>
<td>119 210 291 403 358 437 445 495 555</td>
</tr>
<tr>
<td>Science</td>
<td>89 167 232 299 310 339 345 366 386</td>
</tr>
<tr>
<td>Social and Industrial Administration</td>
<td>– – – – – – 157 295 500 678</td>
</tr>
<tr>
<td>Centre for the Advancement of Learning and Teaching</td>
<td>– 1 3 3 3 3 1 1 2</td>
</tr>
<tr>
<td>Language Centre</td>
<td>– – 1 2 1 – 1 1 –</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>451 835 1,197 1,610 1,617 1,998 2,228 2,408 2,898</td>
</tr>
</tbody>
</table>
## Staff Statistics at 30 April 1983

### Office of the Vice-Chancellor

<table>
<thead>
<tr>
<th>Position</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Executive Officer – the Vice-Chancellor</td>
<td>1</td>
</tr>
<tr>
<td>Pro-Vice-Chancellor</td>
<td>1</td>
</tr>
<tr>
<td>Junior Professional, Technical and Other General Staff</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>5</strong></td>
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</table>

### Schools and Academic Service Elements

<table>
<thead>
<tr>
<th>University</th>
<th>Professor, Reader, University Librarian</th>
<th>Senior Lecturer, Lecturer</th>
<th>Other Teaching and Research Staff</th>
<th>Professional, Technical and Other General Staff</th>
<th><strong>Total</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>School of Australian Environmental Studies</td>
<td>6</td>
<td>19</td>
<td>28</td>
<td>30</td>
<td><strong>83</strong></td>
</tr>
<tr>
<td>School of Humanities</td>
<td>3</td>
<td>27</td>
<td>13</td>
<td>19</td>
<td><strong>62</strong></td>
</tr>
<tr>
<td>School of Modern Asian Studies</td>
<td>2</td>
<td>20</td>
<td>13</td>
<td>17</td>
<td><strong>52</strong></td>
</tr>
<tr>
<td>School of Science</td>
<td>4</td>
<td>25</td>
<td>23</td>
<td>31</td>
<td><strong>83</strong></td>
</tr>
<tr>
<td>School of Social and Industrial Administration</td>
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<td>17</td>
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<tr>
<td>Centre for Continuing Studies in Language</td>
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<td>1</td>
<td>1</td>
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<td>Library</td>
<td>1</td>
<td></td>
<td></td>
<td>45</td>
<td><strong>46</strong></td>
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<td><strong>Total</strong></td>
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<td><strong>116</strong></td>
<td><strong>76</strong></td>
<td><strong>177</strong></td>
<td><strong>407</strong></td>
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</table>
### GENERAL ELEMENTS

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<tr>
<th></th>
<th>Executive Officers</th>
<th>Senior Professional, Technical &amp; Other General Staff</th>
<th>Junior Professional, Technical &amp; Other General Staff</th>
<th>TOTAL</th>
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</thead>
<tbody>
<tr>
<td>Business Management</td>
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<td>1</td>
<td>24</td>
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<tr>
<td>Secretariat</td>
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<td>5</td>
<td>31</td>
<td>37</td>
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<tr>
<td>Site and Buildings</td>
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<td>2</td>
<td>42</td>
<td>45</td>
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<tr>
<td>Independent Operations</td>
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<td>45</td>
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<td><strong>TOTAL</strong></td>
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<td><strong>10</strong></td>
<td><strong>140</strong></td>
<td><strong>153</strong></td>
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### DETACHMENTS OF FACULTY STAFF ON OUTSIDE STUDIES PROGRAMMES 1977-83

<table>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
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<td>School of Australian Environmental Studies</td>
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<td>-</td>
<td>6</td>
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<td>8</td>
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<tr>
<td>School of Humanities</td>
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<td>4</td>
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<td>2</td>
<td>2</td>
<td>4</td>
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</tr>
<tr>
<td>School of Modern Asian Studies</td>
<td>-</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>School of Science</td>
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<td>6</td>
<td>9</td>
<td>5</td>
<td>6</td>
<td>6</td>
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<tr>
<td>School of Social and Industrial Administration</td>
<td>-</td>
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<td>-</td>
<td>-</td>
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<tr>
<td>Centre for the Advancement of Learning and Teaching</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Language Centre</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>10</strong></td>
<td><strong>12</strong></td>
<td><strong>21</strong></td>
<td><strong>20</strong></td>
<td><strong>21</strong></td>
<td><strong>24</strong></td>
<td><strong>28</strong></td>
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</table>
## ABSENCES OF FACULTY STAFF ON OUTSIDE STUDIES PROGRAMMES
### APPROVED - 1983

<table>
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<tr>
<th>School/Centre</th>
<th>Designation</th>
<th>Number Absent</th>
<th>Total Months Absent</th>
<th>OSPRO Location</th>
<th>Prime Purpose of OSPRO</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Absent</td>
<td>Months</td>
<td>Aust.</td>
<td>O'S</td>
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<tr>
<td>Science</td>
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<tr>
<td></td>
<td>Lecturer</td>
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<td>4</td>
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<tr>
<td></td>
<td>Sub-total</td>
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<tr>
<td>AES</td>
<td>Reader</td>
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<td>4.0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sen. Lecturer</td>
<td>1</td>
<td>5.5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Lecturer</td>
<td>2</td>
<td>8.5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sub-total</td>
<td>4</td>
<td>18.0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Humanities</td>
<td>Reader</td>
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<td>4.5</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sen. Lecturer</td>
<td>2</td>
<td>9.0</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Lecturer</td>
<td>4</td>
<td>18.0</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>STF</td>
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<td>5.0</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sub-total</td>
<td>8</td>
<td>36.5</td>
<td>-</td>
<td>8</td>
</tr>
<tr>
<td>MAS</td>
<td>Sen. Lecturer</td>
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<td>6.0</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Lecturer</td>
<td>4</td>
<td>19.0</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>STF</td>
<td>3</td>
<td>13.5</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Sub-total</td>
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<td>38.5</td>
<td>-</td>
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<tr>
<td>SIA</td>
<td>Professor</td>
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<td>5.5</td>
<td>-</td>
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</tr>
<tr>
<td></td>
<td>Lecturer</td>
<td>1</td>
<td>4.0</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sub-total</td>
<td>2</td>
<td>9.5</td>
<td>-</td>
<td>2</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>28</td>
<td>128.0</td>
<td>3</td>
<td>25</td>
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</tbody>
</table>
TOTAL STUDENTS ENROLLED BY SCHOOL *

- SCHOOL OF AUSTRALIAN ENVIRONMENTAL STUDIES
- SCHOOL OF HUMANITIES
- SCHOOL OF MODERN ASIAN STUDIES
- SCHOOL OF SCIENCE
- SCHOOL OF SOCIAL AND INDUSTRIAL ADMINISTRATION

* In view of their small size, the number of enrolments in the Centre for Advancement of Learning and Teaching and the former Language Centre are not included in this diagram.
ALL STAFF BY DIVISION/CENTRE — 1975 AND 1983

1975
TOTAL STAFF: 199

VC 3

AES 27
S & B 29
HUM 15
MAS 14
BM 17
SCI 31
CALT 7

1983
TOTAL STAFF: 565

VC 5

AES 63
S & B 45
BM 26
GUUS, BCS, NHC, QFDC 45
LIB 46
CALT 24
SCI 93
HUM 82
MAS 52
CCSL 3

AES School of Australian Environmental Studies
HUM School of Humanities
MAS School of Modern Asian Studies
SCI School of Science
SIA School of Social and Industrial Administration
CALT Centre for the Advancement of Learning and Teaching
CCSL Centre for Continuing Studies in Language
LIB University Library
GUUS Griffith University Union of Students
QFDC Queensland Film and Drama Centre
BCS Board of Community Services
NHC Nathan Housing Company
BM Business Management
S & B Site and Buildings
SECT Secretariat
VC Vice-Chancellor’s Office
### SUMMARY — ALL FUNDS — 1983

#### OPENING BALANCES – 1 JANUARY

<table>
<thead>
<tr>
<th>Fund Type</th>
<th>1982</th>
<th>1983</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Fund</td>
<td>22,435 Dr</td>
<td>4,398</td>
</tr>
<tr>
<td>Capital Fund – Projects</td>
<td>593,737</td>
<td>171,262</td>
</tr>
<tr>
<td>– Equipment</td>
<td>67,085</td>
<td>128,622</td>
</tr>
<tr>
<td>Special Research Funds</td>
<td>71,368</td>
<td>13,876</td>
</tr>
<tr>
<td>Bequests, Donations &amp; Other Special Funds</td>
<td>1,309,042</td>
<td>2,032,698</td>
</tr>
<tr>
<td>Suspense</td>
<td>3,229,867</td>
<td>3,766,701</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5,248,664</td>
<td>6,117,557</td>
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</tbody>
</table>

#### RECEIPTS

<table>
<thead>
<tr>
<th>Fund Type</th>
<th>1982</th>
<th>1983</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Fund</td>
<td>14,802,882</td>
<td>15,931,308</td>
</tr>
<tr>
<td>Capital Fund – Projects</td>
<td>2,355,000</td>
<td>190,000</td>
</tr>
<tr>
<td>– Equipment</td>
<td>501,292</td>
<td>541,780</td>
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<tr>
<td>Special Research Funds</td>
<td>781,898</td>
<td>1,019,109</td>
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<tr>
<td>Bequests, Donations &amp; Other Special Funds</td>
<td>1,453,226</td>
<td>1,411,564</td>
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<tr>
<td><strong>Suspense (Excess of Receipts over Payments)</strong></td>
<td>536,834</td>
<td>392,959</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20,431,132</td>
<td>19,486,720</td>
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</table>

#### PAYMENTS

<table>
<thead>
<tr>
<th>Fund Type</th>
<th>1982</th>
<th>1983</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Fund</td>
<td>14,776,049</td>
<td>15,730,254</td>
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<tr>
<td>Capital Fund – Projects</td>
<td>2,777,475</td>
<td>323,010</td>
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<td>– Equipment</td>
<td>439,755</td>
<td>566,673</td>
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<tr>
<td>Special Research Funds</td>
<td>639,380</td>
<td>1,042,772</td>
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<tr>
<td>Bequests, Donations &amp; Other Special Funds</td>
<td>729,570</td>
<td>1,482,556</td>
</tr>
<tr>
<td><strong>Suspense (Excess of Receipts over Payments)</strong></td>
<td>19,562,239</td>
<td>19,145,265</td>
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</table>

#### BALANCES – 31 DECEMBER

<table>
<thead>
<tr>
<th>Fund Type</th>
<th>1982</th>
<th>1983</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Fund</td>
<td>4,398</td>
<td>205,452</td>
</tr>
<tr>
<td>Capital Fund – Projects</td>
<td>171,262</td>
<td>38,252</td>
</tr>
<tr>
<td>– Equipment</td>
<td>128,622</td>
<td>103,729</td>
</tr>
<tr>
<td>Special Research Funds</td>
<td>13,876</td>
<td>9,787Dr</td>
</tr>
<tr>
<td>Bequests, Donations &amp; Other Special Funds</td>
<td>2,032,698</td>
<td>1,961,706</td>
</tr>
<tr>
<td><strong>Suspense</strong></td>
<td>3,766,701</td>
<td>* 4,159,660</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6,117,557</td>
<td>6,459,012</td>
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</tbody>
</table>

Balance held as follows:

<table>
<thead>
<tr>
<th>Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investments</td>
<td>6,867,063</td>
</tr>
<tr>
<td>Bank Accounts</td>
<td>406,051 Dr</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6,549,012</td>
</tr>
</tbody>
</table>

At 31 December 1983 the indebtedness of the University in respect of loan raisings was $3,110,806.62.

The sum of $3,680,000 being the first instalment of the 1983 grants payable under the States Grants (Tertiary Education Assistance) Act 1981 was received in December 1982.

The sum of $4,062,000 being the first instalment of the 1984 grants payable under the States Grants (Tertiary Education Assistance) Act 1981 was received in December 1983.
GENERAL FUND

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31 DECEMBER 1983

1982 1983
$ $ $ 
22,435 Dr
THE BALANCE AT 1 JANUARY WAS
RECEIPTS FOR THE YEAR WERE:
14,759,000 Endowment – Australian Government 15,357,000
Contribution from University Fund 470,000
280,503 Other 250,282
15,039,503 16,077,282
236,621 Less Investment Income Transferred to University Fund 145,974
14,802,882 15,931,308
FROM WHICH THE FOLLOWING PAYMENTS WERE
MADE:

Academic Activities
8,397,991 Teaching and Research 8,947,768
279,257 Research Only 256,200
1,136,248 9,203,968

Academic Services
1,341,034 Libraries 1,343,079
556,890 Other 591,499
2,005,289 1,934,578

Student Services
255,933 398,819

General University Services
1,703,664 Administration 1,827,485
844,002 Overheads 976,119
1,397,318 Buildings and Grounds 1,389,485
4,193,089

14,776,049 15,790,254

RESULTING IN AN EXCESS OF RECEIPTS OVER
PAYMENTS OF

4,398 201,054

LEAVING A BALANCE AT 31 DECEMBER OF

205,452

CAPITAL FUND

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31 DECEMBER 1982

<table>
<thead>
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<th></th>
<th>Balance 1.1.83</th>
<th>Receipts</th>
<th>Payments</th>
<th>Balance 31.12.83</th>
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<tr>
<td></td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Projects –</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Grants – Commonwealth Government</td>
<td>171,262</td>
<td>190,000</td>
<td>323,010</td>
<td>38,252</td>
</tr>
<tr>
<td></td>
<td>171,262</td>
<td>190,000</td>
<td>323,010</td>
<td>38,252</td>
</tr>
<tr>
<td>Equipment –</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grants – Commonwealth Government</td>
<td>128,622</td>
<td>540,000</td>
<td>1,780</td>
<td>103,729</td>
</tr>
<tr>
<td>Charges for Equipment Use</td>
<td>128,622</td>
<td>541,780</td>
<td>566,673</td>
<td>103,729</td>
</tr>
</tbody>
</table>

35
## RESEARCH GRANTS

### STATEMENT OF RECEIPTS AND PAYMENTS FOR YEAR ENDED 31 DECEMBER 1983

<table>
<thead>
<tr>
<th></th>
<th>Balance at 1 January 1983</th>
<th>Receipts</th>
<th>Payments</th>
<th>Balance at 31 December 1983</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Research Grants Committee</td>
<td>28,543</td>
<td>395,238</td>
<td>379,673</td>
<td>44,108</td>
</tr>
<tr>
<td>Tertiary Education Commission</td>
<td>–</td>
<td>150,000</td>
<td>150,000</td>
<td>–</td>
</tr>
<tr>
<td>Other</td>
<td>14,667 Dr</td>
<td>473,871</td>
<td>513,099</td>
<td>53,895 Dr</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>13,876</strong></td>
<td><strong>1,019,109</strong></td>
<td><strong>1,042,772</strong></td>
<td><strong>9,787</strong></td>
</tr>
</tbody>
</table>

### SUMMARY OF EXPENDITURE TO 31 DECEMBER 1983

#### RECURRENT EXPENDITURE

Expenditure to 31 December 1982: $72,888,691
Expenditure 1983: $15,730,254

#### CAPITAL EXPENDITURE

<table>
<thead>
<tr>
<th></th>
<th>Land</th>
<th>Site Works, Investigations, Consultancies, etc.</th>
<th>Buildings</th>
<th>Equipment</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditure to 31 December 1982</td>
<td>682,039</td>
<td>159,351</td>
<td>1,925,917</td>
<td>27,054,622</td>
<td>33,382,238</td>
</tr>
<tr>
<td>Expenditure 1983</td>
<td>–</td>
<td>–</td>
<td>95,623</td>
<td>227,387</td>
<td>33,664</td>
</tr>
<tr>
<td>Expenditure to 31 December 1983</td>
<td>682,039</td>
<td>159,351</td>
<td>2,021,540</td>
<td>27,282,009</td>
<td>34,271,921</td>
</tr>
</tbody>
</table>

### STATEMENT OF EXPENDITURE FROM CAPITAL FUND FOR YEAR ENDED 31 DECEMBER 1983

<table>
<thead>
<tr>
<th></th>
<th>$</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village Centre</td>
<td>110,866</td>
<td></td>
</tr>
<tr>
<td>Fifth School Building</td>
<td>43,661</td>
<td></td>
</tr>
<tr>
<td>Minor Works and Site Works and Services - 1983</td>
<td>166,363</td>
<td></td>
</tr>
<tr>
<td>Minor Works and Site Works and Services - 1984</td>
<td>2,120</td>
<td>168,483</td>
</tr>
<tr>
<td>Total Projects</td>
<td>323,010</td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td>566,873</td>
<td></td>
</tr>
<tr>
<td><strong>Total Capital Payments</strong></td>
<td><strong>889,883</strong></td>
<td></td>
</tr>
</tbody>
</table>
## BEQUESTS, DONATIONS AND OTHER SPECIAL FUNDS
### STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED 31 DECEMBER 1983

<table>
<thead>
<tr>
<th>Description</th>
<th>Balance at 1.1.83</th>
<th>Receipts</th>
<th>Payments</th>
<th>Balance at 31.12.82</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance at 1.1.83</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>AINSE Postgraduate Scholarships</td>
<td>1,217 Dr</td>
<td>2,248</td>
<td>569</td>
<td>462</td>
</tr>
<tr>
<td>AUDIP Incentive Grant – Rose</td>
<td>96</td>
<td>–</td>
<td>111</td>
<td>15 Dr</td>
</tr>
<tr>
<td>Australia China Council – MAS</td>
<td>1,042</td>
<td>133</td>
<td>1,167</td>
<td>8</td>
</tr>
<tr>
<td>Australia Council – Writer in Residence</td>
<td>–</td>
<td>2,457</td>
<td>2,338</td>
<td>119</td>
</tr>
<tr>
<td>CALT Charges – CCSL</td>
<td>–</td>
<td>1,173</td>
<td>1,165</td>
<td>8</td>
</tr>
<tr>
<td>CALT Publications</td>
<td>934</td>
<td>130</td>
<td></td>
<td>1,064</td>
</tr>
<tr>
<td>Capital Funds Interest</td>
<td>234,790</td>
<td>66,733</td>
<td>72,592</td>
<td>228,933</td>
</tr>
<tr>
<td>Centre for Continuing Studies in Language</td>
<td>50,000</td>
<td>102,877</td>
<td>145,586</td>
<td>7,291</td>
</tr>
<tr>
<td>China Trip</td>
<td>26</td>
<td>–</td>
<td>–</td>
<td>26</td>
</tr>
<tr>
<td>Commonwealth Games Staff Replacement</td>
<td>–</td>
<td>35,000</td>
<td>6,744</td>
<td>28,256</td>
</tr>
<tr>
<td>Conference Co-ordinating</td>
<td>2,015</td>
<td>38,260</td>
<td>39,556</td>
<td>719</td>
</tr>
<tr>
<td>Consulting Fees – AES</td>
<td>4,138</td>
<td>472</td>
<td>1,591</td>
<td>3,019</td>
</tr>
<tr>
<td>Continuing Education Funds</td>
<td>52,096</td>
<td>8,901</td>
<td>1,158</td>
<td>59,839</td>
</tr>
<tr>
<td>CSAAR Publications</td>
<td>947 Dr</td>
<td>4,143</td>
<td>3,791</td>
<td>595 Dr</td>
</tr>
<tr>
<td>CSIRO Joint Research – Applied Organic Chemistry</td>
<td>12,000</td>
<td>31,860</td>
<td>7,954</td>
<td>35,906</td>
</tr>
<tr>
<td>Curriculum Development Centre Grant – MAS</td>
<td>135</td>
<td>–</td>
<td>135</td>
<td>–</td>
</tr>
<tr>
<td>Justice Dunn Memorial</td>
<td>–</td>
<td>6,750</td>
<td>1,523</td>
<td>5,227</td>
</tr>
<tr>
<td>Editorship – Sociological Journal</td>
<td>3,018</td>
<td>3,466</td>
<td>3,721</td>
<td>2,763</td>
</tr>
<tr>
<td>Family Welfare Workshop – AES</td>
<td>108 Dr</td>
<td>108</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Gippsland Institute of Advanced Education</td>
<td>875</td>
<td>1,110</td>
<td>651</td>
<td>1,334</td>
</tr>
<tr>
<td>Griffith Asian Papers Publications</td>
<td>3,690</td>
<td>831</td>
<td>152</td>
<td>4,369</td>
</tr>
<tr>
<td>Hancock Bros Pty Ltd Fund</td>
<td>67,614</td>
<td>9,633</td>
<td>7,141</td>
<td>70,106</td>
</tr>
<tr>
<td>Health Book Sales – AES</td>
<td>–</td>
<td>1,308</td>
<td>145</td>
<td>1,163</td>
</tr>
<tr>
<td>Information Technology Week – SIA</td>
<td>–</td>
<td>4,639</td>
<td>4,451</td>
<td>188</td>
</tr>
<tr>
<td>Indonesian Social Sciences Project</td>
<td>–</td>
<td>192,610</td>
<td>122,616</td>
<td>69,994</td>
</tr>
<tr>
<td>Library Special Purpose Fund</td>
<td>39,106</td>
<td>49,624</td>
<td>56,487</td>
<td>32,243</td>
</tr>
<tr>
<td>NMR Centre Operations</td>
<td>3,037</td>
<td>87,922</td>
<td>100,345</td>
<td>9,386 Dr</td>
</tr>
<tr>
<td>MIM Holdings – Student Counselling</td>
<td>120</td>
<td>8</td>
<td>128</td>
<td>–</td>
</tr>
<tr>
<td>Queensland Film &amp; Drama Centre</td>
<td>34,984</td>
<td>107,122</td>
<td>72,383</td>
<td>69,723</td>
</tr>
<tr>
<td>Research Equipment Fund – Knight</td>
<td>24,835</td>
<td>1,054</td>
<td>24,260</td>
<td>1,429</td>
</tr>
<tr>
<td>Science Equipment Charge</td>
<td>2,058</td>
<td>298</td>
<td>–</td>
<td>2,356</td>
</tr>
<tr>
<td>SGIO Lecture Donation – Science</td>
<td>14</td>
<td>–</td>
<td>–</td>
<td>14</td>
</tr>
<tr>
<td>SGIO Endowment Lecture – S.I.A.</td>
<td>–</td>
<td>509</td>
<td>212</td>
<td>297</td>
</tr>
<tr>
<td>SIA Accounting Texts</td>
<td>70</td>
<td>3,498</td>
<td>3,495</td>
<td>73</td>
</tr>
<tr>
<td>Sir Samuel Griffith Biography Donations</td>
<td>7,328</td>
<td>942</td>
<td>–</td>
<td>8,270</td>
</tr>
<tr>
<td>SIA Workshops</td>
<td>907</td>
<td>117</td>
<td>–</td>
<td>1,024</td>
</tr>
<tr>
<td>Staff Disability Fund</td>
<td>11,337</td>
<td>1,457</td>
<td>–</td>
<td>12,794</td>
</tr>
<tr>
<td>Student Exchanges – MAS</td>
<td>10,955 Dr</td>
<td>62,496</td>
<td>51,541</td>
<td>–</td>
</tr>
<tr>
<td>Student Loan Fund</td>
<td>20,051</td>
<td>52,637</td>
<td>66,765</td>
<td>5,923</td>
</tr>
<tr>
<td>University Publications</td>
<td>24,586</td>
<td>3,143</td>
<td>547</td>
<td>27,182</td>
</tr>
<tr>
<td>University Fund</td>
<td>1,365,759</td>
<td>497,873</td>
<td>657,316</td>
<td>1,206,316</td>
</tr>
<tr>
<td>University Development Fund</td>
<td>50,000</td>
<td>6,362</td>
<td>–</td>
<td>56,362</td>
</tr>
<tr>
<td>Vice-Chancellor’s Concert Fund</td>
<td>448 Dr</td>
<td>7,120</td>
<td>5,980</td>
<td>692</td>
</tr>
<tr>
<td>Works of Art Fund</td>
<td>26,210</td>
<td>13,570</td>
<td>14,546</td>
<td>25,234</td>
</tr>
<tr>
<td>Deposit Fund</td>
<td>3,702</td>
<td>970</td>
<td>3,694</td>
<td>978</td>
</tr>
</tbody>
</table>

**TOTAL– BEQUESTS, DONATIONS & OTHER SPECIAL FUNDS**

|                               | 2,032,698         | 1,411,564       | 1,482,556     | 1,961,706           |
We certify that, in our opinion, the foregoing statements of receipts and payments fairly sets out the transactions for the period 1 January 1983 to 31 December 1983 and the fund balances as at 31 December 1983 on a basis consistent with that applied in respect of the financial year last preceding.

F.J. Willett
VICE-CHANCELLOR

K. See
BUSINESS MANAGER

I have examined the accounts of the Griffith University and I have obtained all the information and explanations that I have required. The foregoing statements of receipts and payments are in agreement with those accounts and in my opinion have been properly drawn up so as to present a true and fair view of transactions for the period 1 January 1983 to 31 December 1983 and of the fund balances as at 31 December 1983 on a basis consistent with that applied in respect of the financial year last preceding.

W.B. McGEEBER
ACTING AUDITOR-GENERAL
OF QUEENSLAND
ADDITIONAL INFORMATION ON THE UNIVERSITY

Additional information on the University is contained in a number of other publications such as:

- Research Report;
- Student Handbook;
- ‘Griffith University’ brochure;
- ‘Postgraduate Research Degrees’ brochure;
- ‘Information for Prospective Staff’ brochure;
- ‘The Village’ brochure; and
- University Calendar

Copies of the University Calendar, which contains the Griffith University Act 1971-83, the University’s statutes and rules, committee constitutions and memberships, are held in the Schools and the Library for reference by students and staff. Copies of the Calendar are also held by the Registrars and in the libraries of other Australian universities. The Student Handbook sets out information on all courses being offered by the University and is available from the University Co-operative Bookshop at a cost of $3.50 plus postage (within Australia).