Three former Prime Ministers honoured by the University

Alumni Association in the making

Historic University occasion

Our graduates – where they are now

Australian manufacturing – the problems

Autumn 1990
It gives me great pleasure to tell you of current progress in the development of the University's alumni operation. But first, you will notice that this publication, previously called the Gazette, has a new title and that the format has also been altered. The new name, Wollongong Outlook, is intended to reflect the dynamism and drive which The University of Wollongong is proud to display and the changes in format are intended to enhance the whole publication. The Graduates’ Gazette, which previously appeared at the back, is no longer a separate entity. Instead this material has been integrated and there are now more articles about what our graduates are doing. If any readers wish to be featured in future issues, all you have to do is write and let me know or return the response ‘sheet’ to me. The number of issues of Wollongong Outlook per year will be two instead of four Gazettes as previously, but the content of each has doubled. The dates of publication will now be June and October. We hope you enjoy the new format and look forward to your comments. The editor is hoping to publish a letters column, but we need your assistance to achieve this.

This is not the only progress in the development of the University’s alumni operation. As you may be aware, the Graduates Group within the Friends of the University (for whom I have been Executive Officer since June 1989) has been working tirelessly on behalf of the graduates of this University for many years, organising various events and activities in the Wollongong area. The expansion of the University in recent years to international status, with twice as many students now as ten years ago, has made the task of keeping in touch with our graduates increasingly challenging. Many former students have returned to their home countries in Asia, Europe and America and many more to Australian cities and country areas, including Sydney and the Illawarra.

The University wishes to maintain contact with as many of its alumni as possible. This is the simple reason for the development of an Alumni Association, which I am working with the Graduates Group members to develop. Membership will not be restricted to graduates, but will be open to any former students and also former staff. Details are still to be finalised, but any graduates or other alumni interested in becoming actively involved, on either a faculty, departmental or regional basis (or indeed on any other basis for a group of people with a link with the University to get together), I should be delighted to hear from them.

I shall correspond with you regularly through this column and welcome any feedback from you as alumni of the University and readers of this publication. I shall keep you informed of progress in the development of an alumni operation for the University and shall be happy to give much more detail to interested individuals than I can outline here.

Plans for 1990 include receptions for our graduates to be held in two Asian cities, probably Hong Kong and Kuala Lumpur, and also one in Canberra.

Until next time....
The Wollongong Outlook will be published once again this year (in October).

Editor and designer
George Wilson
Alumni Officer
Juliet Richardson
Editors of regional and national newspapers are invited to make use of any material in this journal. No acknowledgement is required.

For further information contact
Gillian Curtis, Media Liaison
(042) 27 9926
Gillian Curtis will supply illustrations on request.

This journal is published by
The University of Wollongong
PO Box 1144
Wollongong
NSW 2500
Australia
Telephone (042) 27 0555
Facsimile (042) 27 0477

4
Uni honours Prime Ministers
John Gorton, Michael Somare and Gough Whitlam with the Chancellor and Vice-Chancellor

6
Alumni profiles
Graduates' Grapevine
Wollongong graduates achieve success

15
Wollongong: role model for UK?
Jim Langridge addresses British conference

18
Marketing Universities
Should we be encouraging students to look beyond their own state borders?

The new Professors
Manufacturing in Australia
Health-care education
Literacy teaching for the future
Attracting international students

Remember to complete the response sheet on page 11
Men who made history

THREE PRIME MINISTERS

It was an occasion to warm the hearts and minds of all alumni, staff and students of the University. It was one that was both moving and unusual—even, perhaps, unique in academic history. For while universities over the decades have honoured former national leaders, it is all but certain that none has done its honouring with so much flair. For The University of Wollongong last December honoured not one prime minister but three—by conferring at a joint ceremony the degree of Doctor of Letters (honoris causa) on Sir John Gorton, Mr Gough Whitlam and Mr Michael Somare.

The unusual ceremony was as much idealistic as it was inspirational—a gathering inspired by the records of humanitarianism, egalitarianism and compassion of all three men—all friends when in office. All three, individually and collectively, have left imprints on Australian and Papua New Guinean history that will undoubtedly endure forever.

John Gorton and Gough Whitlam were both leaders whose political observation-point was miles above that of the conformist diehards of the conservative past. Both men strove to imbue Australians with a sense of national identity—of pride in being Australian—and of a need to encourage literature and the arts and to loosen the colonial chains anchoring Australia to Britain. And most of all, perhaps, of bringing to Australian life a true spirit of egalitarianism.

Michael Somare fits closely into the framework. He was the Chief Minister who worked with both Gorton and Whitlam to bring Papua New Guinea to independence and to become its first prime minister. And it is largely due to the intellectual power of all three that the transition was achieved with dignity and freedom from political conflict.

The ceremony included two musical interludes by the University Singers. Their lilting version of Waltzing Matilda brought a gleam and a warm smile to the face of Sir John Gorton, who remains today ‘Australian to his boot-heels’.

Citations were presented by Pro Vice-Chancellor Professor Lauchlan Chipman, Deputy Vice-Chancellor Professor Ian Chubb and Chairman of the Academic Senate Professor Ron King, respectively for Sir John Gorton, Mr Whitlam and Mr Somare.

Brief profiles of the prime ministers follow. The material used here is drawn from an essay written for the Graduation Program by Ken Inglis, Professor of History at the Australian National University and one of this country’s foremost historians. He was Vice-Chancellor at the University of Papua New Guinea from 1972 until 1975.

GORTON

Sir John Gorton was given leadership of the Liberal Party when Harold Holt disappeared into the surf at Portsea in 1967. He had been born in Melbourne in 1911, the son of an Englishman who had lived in South Africa. He was educated initially in Australia and later went to Oxford, where he graduated in Arts. It was probably in England that his deep love of Australia was born, although he remained steadfastly a loyal citizen of empire, who early in the second world war enlisted early in the RAAF and became a fighter pilot. He was Australia’s first Prime Minister to see active war service.

Gorton joined the Country Party in Victoria when he was an orchardist before the war, and the Liberal Country Party in 1949. That was the year in which he entered politics as a Senator.

His wartime experience gave him a close-up view of the fall of Singapore—the beginning of the process which ended in
January 1968 when Britain withdrew from Suez, and the day on which he became Prime Minister of Australia.

In the wake of Harold Holt's death to the US with his expression of going 'all the way with LBJ'. Gorton was to back away from the phrase with a clutch of cautious provisos.

Over the years he went on record as deploiring foreign ownership of Australian media interests and he intervened in the MLC Life Insurance Company being taken over by British interests. He tried hard to develop an Australian shipping service to carry exports. He became labelled an economic nationalist. He was a centralist, who wanted to see 'instead of six or seven small nations inside one large nation a people proud of the whole Australian nation'.

He was the first Australian Prime Minister to welcome the prospect of a multicultural society. He was an unorthodox conservative. He believed in 1975 that it was wrong for Malcolm Fraser to use the Senate to withhold supply. There was much that Gorton in government began, which Whitlam, farther down the track, was able to finish.

### SOMARE

Michael Somare was born in Rabaul in 1936. And in 1943, when Gorton and Whitlam were engaged in fighting the Japanese, Somare was being educated by them. (He can still sing the Japanese national anthem.)

He along with other boys had his initiation into English primary education at Wewak in 1945. His education in nationality was advanced by posting to other schools away from home, and by training at Sogeri, a training ground for future administrators. He became a radio announcer. He developed an interest in, and an aptitude for, politics.

In 1965 his political education was intensified at the Administrative College. There was not yet a university. That came in 1966 for Somare and his friends, among them Rabbie Namaliu.

His coming to leadership was much less spectacular than was Gorton's.

An older man, Paul Lapun, stood down in favour of the younger, and later, on the eve of independence, praised Somare as a uniter, as a maker of consensus across a land which geography and history had cursed with so many divisions.

'Only an outstanding man', said Lapun in 1975, 'could have gained the loyalty and support of practically the whole country..... we all see Michael Somare as a statesman and as a true Papua New Guinean nationalist'.

Somare saw PNG proclaimed an independent state on 15 September 1975 and from being Chief Minister he became Prime Minister. Gough Whitlam stayed in office just long enough to see this happen.

### WHITLAM

Gough Whitlam's parents were Australian born of English ancestry. He was born in Melbourne, in 1916, five years after Gorton. His family moved to Sydney in 1918 and to Canberra in 1928, where his father became Crown Solicitor.

Both socially and ethnically, he became an unusual Labor Prime Minister; the first since the year of his birth to be of English, not Irish, ancestry; the first in that time not of Catholic religious affiliation; the first to have attended non-Catholic private schools (although in Canberra he went to Telopea Park High and Canberra Grammar). For higher education, in Law and Arts, he went to Sydney.

Elected to the House of Representatives in 1952, Whitlam laboured long for the leadership of his party and even longer to reform it after the disasters of the 1950s. He became Prime Minister after a triumphant campaign built around the slogan, It's Time. Said Whitlam in his policy speech, 'It's time for a new team, with a new program, a new drive for equality of opportunity; it's time to create new opportunities for Australians, time for a new vision of what we can achieve in this generation for our nation and the region in which we live.'

The term 'national identity' had become general currency during the Gorton years. It flourished under Whitlam. So it was with 'new nationalism'.

Declared Whitlam: 'I want every kid to have a desk, with a lamp, and his own room for study'.

In the cause of kids studying their way towards a fairer society, a new Schools Commission co-ordinated and extended federal subsidies to Government and non-Government schools, and fees for university students were abolished. Welfare policies resumed where the Chifley government had left off. From Menzies to Holt, pensions, health benefits and welcome payments in general had been given on the traditional conservative assumption that payments were supplementary to the provisions that citizens could and should make for themselves.

John Gorton was unconservative in believing that they should not because so many could not, and he nudge the health benefit system in the direction of universal coverage.

The Whitlam government went all the way. Medicare is a fine achievement of Australian social democracy, and Gough Whitlam's successors would be wise to remind the patients of Australia that this is a blessing not to be taken for granted. The encouragement given to Australian firms was offered also to other arts.

The full text of Professor Inglis's paper is available from Mr Peter Wood, Assistant Secretary, Academic Services, The University of Wollongong, PO Box 1144, Wollongong, NSW 2500. Tel. (042) 27 0943.
CHANCES ARE...

Call it Kismet, forza del destino, or anything else, Joe Pellegrino calls it simply his buona fortuna

Way back in 1966, when the campus was merely a college of the University of NSW, Joe was among the mere 250 first year students then enrolling. His family had earlier settled in Wollongong, having emigrated among hundreds more from Calabria, on the 'toe' of Italy.

Had Joe's family remained in Italy, none of the children could have aspired to secondary, let alone tertiary education. Nor would Joe's father have found the means to provide qualities of life that were just not possible for countless post World War II Italians.

The main reason for Joe not registering at any of the well-established universities was through a coincidental Italian cultural phenomenon (then) that children never left home until marriage—in any circumstances.

At about the same time and for similar reasons another Italian family settled in Wollongong. It had originated from Basilicatta, a province whose southern boundary borders the shores of the 'heel' of Italy. The two families had been separated by some 300 kilometres in the homeland. They had never met.

Here, thousands of kilometres distant, enters Cupid. In the enrolling queue, Joe accidentally bumps into a very attractive girl. Having apologised, he eventually discovers that she too is from Italy. Yes, you've guessed it! All the way from Basilicatta. And she was joining him in the same accountancy course.

Not only did they graduate together, they eventually got married and now have a son Jason, 14, and a daughter, Linda, 9.

Joe is now G. Pellegrino (BSc BCom DipAcc CPA) of Pellegrino and Associates, Public Accountants. His wife Angela teaches at Wollongong High School.

By far the majority of Italian immigrants arriving in the fifties were employed by BHP. For this reason Joe has a lot to be thankful for because it was through his father's employment there that he himself earned a company scholarship which made his tertiary tuition possible.

But Joe attributes his present-day success mainly to the encouragement and friendly persuasion of a New Zealand family who became his neighbours on first settling in Wollongong.

It was these friends who pointed him towards tertiary education rather than tradesmanship, something far beyond the dreams of immigrant parents in those days.

Before branching out on his own, Joe was an accountancy tutor on campus for four years.

Joe Pellegrino and Angela Coppola were the very first children of Italian immigrants to graduate from Wollongong University, unwittingly giving encouragement to blossoming creative talents which might otherwise have been lost to our cosmopolitan society.

The strange thing about all this is that we would never have known about it if I had not by sheer chance had the good fortune to welcome Joe as a most recent Life Member of the Friends of the University.

Michael Arrighi
HELEN PAULUCCI

Helen Paulucci has her mind set on big things in psychology - in fact, the question of the mind is literally what Helen is studying. It's a question which has intrigued, perplexed and confounded philosophers and psychologists for thousands of years. And this PhD student is now to study at Oxford University as part of her search for the truth about the human mind.

In lay terms Helen is seeking to formulate a theory which will help us understand exactly what the human mind is and what it comprises.

It is a subject which has fascinated Helen since she began a BA in psychology in 1983 and it is a question which has profound implications not only for psychologists but for many other disciplines.

Helen's research has led her to re-evaluate the works of famous American psychologist George Herbert Mead who, she believes, has perhaps come closest to explaining the nature of the mind.

Last year, she met Oxford professor Rom Harre, whose main work also has been in the area of the conscious mind. Helen says Dr Harre's work has the potential to overthrow some prevalent psychological theories. After discussing Helen's work he agreed to supervise her PhD study for a year.

'It is a great honour to have the opportunity to study at Oxford', she said. 'Simply by being there I will have access to the leaders in this field and to resources that are not available here.'

When she finishes her studies she hopes to teach and design academic courses and is considering writing a book on theories of the mind.

Helen has not always desired a career in academia and does not come from a family with a strong academic background.

In the late 1970s she began a Bachelor of Science degree, majoring in Mathematics, at the University of New South Wales. After two years she dropped out and worked as a commercial artist for three years before leaving to travel around Europe and England, where she visited her birthplace, Liverpool.

It was the influence of a woman psychologist she met at this time that triggered Helen's return to university. She had come to believe she would never finish a degree.

After returning to Wollongong, where she grew up, Helen enrolled in a BA which, receiving credit for her previous university course, she was able to complete in two years.

By this time Helen needed funds and obtained work as a research assistant for 18 months with the University's Equal Opportunity Unit. Later she returned and completed a first-class honours degree.

A scholarship allowed her to begin her PhD and will cover about half her costs at Oxford. At present Helen is awaiting the results of further scholarship applications and she expects to leave in late August.

Helen now believes part of the reason she quit the University of New South Wales was the sense of alienation she felt living in a 'mammoth concrete jungle'. 'I really like this University and I know it's been said before, but Wollongong University has a very pleasant atmosphere,' she said.

'I also think it is really important to encourage people with backgrounds like mine to pursue academic work, and for them to realise that going somewhere like Oxford is a real possibility.'
Graduates' Grapevine Profile

Michael Clarke waited almost 30 years to finish his formal education and his experiences have led him to believe all students should delay their entrance to university - although obviously, not for quite so long.

Michael completed a Bachelor of Arts degree in history and industrial relations as a mature age student and his viewpoint stems from his wide range of industrial work experiences and his community work.

He says the Australian education system does not fit young people for their career paths. If he had his way school leavers would not be able to become apprentices or go to university or other tertiary studies straight from school because doing that they have no experience of what else there is available to them.

According to Michael, experiences in life provide material for a book but reading a book does not fit with the experience in life that is needed in the real world. To be aware of what life is all about he says, 'you must first get a little dirt on your hands'.

Illness forced Newcastle-born Michael to leave school in his first year. He contracted polio and then rheumatic fever and several other major sicknesses followed in their wake. He missed so much school that it seemed useless to try and catch up, even though Michael loved school and was a good student.

At 15 he became an apprentice mechanic and then worked in a coal mine for nine months. Later he worked in the construction field where a fellow worker and tech teacher took him under his wing.

Michael soon obtained several competency certificates, such as crane driving, rigging and scaffolding, and in 1966 he joined the NSW Department of Labour and Industry.

From 1969 until 1976 he taught at Newcastle, then Nowra and Wollongong technical colleges.

In 1977 he was appointed a port conciliator - a part-time job where he had to arbitrate in disputes or impending disputes between the waterside workers union and shipping companies.

By that same year Michael had felt the urge to return to university and finish his formal schooling.

Because of his illness he said he had always felt deprived and jealous of people who had had a good education. Under new regulations formulated by the Whitlam Government, Michael, then 43, enrolled at Wollongong University.

He chose history and industrial relations, firstly, because of his main interests in life and secondly, because he felt the two subjects complemented each other. He felt that one could not understand industrial relations without first understanding the history and development of our societies.

"To truly understand where our society is at the present and what goals we can set for the future, we have to understand the past," he says.

Initially, Michael admits his first weeks of university were a 'culture shock'. At first he felt all the younger students were 'leaving him for dead' until one day he noticed that in a tutorial all the students were sitting back waiting for him to say something. He realised then that his life experiences were valuable and educational - something the younger students did not have.

Still, Michael said he never felt really different from his fellow students. They accepted him and he speaks highly of his lecturers and fellow students.

Michael says attending university certainly broad-
FRANCA PAROLIN

Franca Parolin completed a Bachelor of Arts degree in French and Italian at Wollongong in 1984 before undertaking an LLB at Sydney University.

She chose to complete her first degree at Wollongong after she visited the Sydney universities and found them rather impersonal. Franca's sister, who studied at Wollongong, recommended that she stay in her home town since the French/Italian course had a good reputation.

Franca later was awarded an Illawarra Credit Union Scholarship in her second year and half of her third year. While she enjoyed her law studies she found Sydney University lacked the personal warmth and informality she had experienced in Wollongong.

But that is not to say Franca considers Wollongong University to be provincial in outlook. 'When I was in Wollongong I was used to smallish tutor groups and it was a shock to be suddenly confronted with 300 to 400 students', she said.

'As well, the need to make appointments, sometimes two weeks in advance, to see tutors to discuss even minor problems took a long time to get used to. In Wollongong, you could virtually roll up and knock on the door.'

There was also a dearth of social activities with tutors and lecturers in Sydney, whereas in Wollongong students are often able to get to know their teachers socially as well as academically.

Franca says she found some class distinction in the Sydney Law School, 'based very much on where you lived in Sydney, what school you went to and your HSC mark. It was a little strange after coming from Wollongong University where at that time most people were Wollongong based,' Franca said.

'It didn't really matter which school you went to or what suburb you lived in – everyone was united in coming to Wollongong University to study and enjoy themselves. It took me a whole year to adjust to the differences between Wollongong and Sydney.' After qualifying Franca joined a leading Sydney law firm but decided to return to Wollongong to live. 'I like Wollongong, I was offered jobs in Sydney but Wollongong was my choice.'

Today she is working for the well-known firm Kell, Heard, McEwan and Lough who are considering offering a scholar-
Franca Parolin from previous page

Franca is involved in litigation work, preparing documents and briefs for barristers, and is heavily involved in criminal law. She was disappointed that Wollongong had no legal course when she began her law degree. 'I used to use the law reports in the library when I was a student and I always thought it was a shame there was no law faculty to make full use of them,' she said.

She is eager to see an Alumni Association developed in Wollongong. Most well-established universities have associations for graduates and it is, she says, a great way of keeping in touch with former fellow students. 'Most of my closest friends are people I studied with at Wollongong. And I still keep in touch with many of the lecturers. My days at The University of Wollongong are filled with happy memories.'

1986 and 1989

Annette Ware
DipTeach, BEd

After graduating in 1986 Annette spent two years teaching mathematics and PE in Campbelltown. She then worked as an Australian Volunteer in Papua New Guinea, where she was based in a Catholic Mission high school on an island (New Ireland) north-east of the mainland. Although very beautiful, this island was also very isolated, and Annette found herself not only teacher to the local children, but also mother, social worker and friend. She speaks with great affection of these people. 'The experience for me was just amazing. Living and working with the local people makes you really understand and appreciate their culture, customs and systems much better than simply being a tourist.' Annette found travelling through Asia and intends to make her way eventually to London where she will seek employment.

1986, 1988

Edward Arrowsmith
BCA MCA

On completing the Master of Creative Arts program in 1988 at The University of Wollongong, Edward gained the position of lecturer in Arts Studies (ceramics) at Hedland College in Western Australia. He is presently Lecturer-in-charge of Art Studies; there co-ordinating award courses in the Visual Arts; he is also co-ordinator of non-award courses and workshops which are held in the more remote areas of the Pilbara region of Western Australia, such as Marble Bar, Wittenoom and Newman.

In order to consolidate recent successful exhibitions of his work in ceramics in Sydney and Western Australia, he is preparing to travel to Europe and the United States with the intention of exhibiting his work there.

1978

Susan Hickey, BSc (Hons)

Since graduating in 1978, Susan has been a resident of Darwin in the Northern Territory. The 'Top End' has been good to her and she has no plans to leave in the near future.

The first eight years were spent with the NT Geological Survey, Department of Mines and Energy. Her initial employment was as a geologist in the Regional Geological Mapping Section where she completed a number of 1:100,000 geological maps in the Litchfield Block.

The life as a field geologist appealed to her and she thoroughly enjoyed the experience. In 1984 she moved 'up the ladder' and became Geologist-in-Charge, Geoscience Resource Section, still in the NT Geological Survey. The change to geological data management was a challenge and although she missed the field work, the new position allowed involvement in other activities outside work (such as the Army Reserve).

Susan writes, 'If anyone plans to visit Darwin please don't hesitate to contact me. I am always happy to show off the 'Top End' and our easy lifestyle.'
Barry Anger, BSc (Tech)

Barry Anger, featured second from the left in the back row of the early graduation photograph (above), is one of the University's original graduates.

He started at Australian Iron and Steel as a student cadet in 1959 and studied part-time for the BSc (Tech) in Mechanical Engineering, graduating in 1966. Barry left AIS in 1970 and worked as a musician for two years before taking up a position as a Project Engineer with Australian Fertilisers Ltd in 1973.

Barry continued working for this company, now known as Greenleaf Pty Ltd, for the next 16 years, being promoted to Works Engineer, Works Superintendent and finally Construction Engineer.

In 1989 Barry took early retirement and is now in the process of establishing his own project engineering company. His son Timothy is presently in the third year of a part-time degree in Civil Engineering, also at The University of Wollongong.

RESPONSE SHEET

Tell us where you are, what you're doing... and please send a picture – black and white if possible and with good contrast.

Name (please print)___________________________
Address ________________________________ Postal code _____ Country ____
Home phone __________________ Work phone __________
Degree(s) held __________________ Year(s) of Graduation _________
Notes and news

(I am happy for you to publish these details.

Please send to:
Juliet Richardson Signature
Alumni Officer
The University of Wollongong
PO Box 1144, Wollongong, NSW 2500.

Date______

11
The NEW PROFESSORS

**Professor Barry Conyngham**

Barry Conyngham, the new Head of the School of Creative Arts, is a prominent Australian composer. After an initial involvement with jazz and popular music, he studied with Peter Sculthorpe at Sydney University and with Toru Takemitsu in Japan.

He has received numerous awards, prizes and grants for composition including a Churchill Fellowship (1970), a Harkness Fellowship (1972-74), an Australian Council Fellowship (1975) and a Senior Fulbright Fellowship (1982). In 1985 his Double Concerto *Southern Cross* was awarded the highest place yet achieved by an Australian composer at the International Rostrum of Composers in Paris.

His works have been used by several choreographers; the most acclaimed piece was Graeme Murphy's *Rumours* (1978).

During 1988 Barry Conyngham composed *Bennelong* for the Australian Chamber Orchestra and his largest work to date *Vast*, a full-length ballet for Graeme Murphy. The work was funded by the Bicentennial Authority.

Before coming to Wollongong the new Head was Reader in Composition at the University of Melbourne.

**Professor Chris Cook**

Professor Cook, now head of the Department of Electrical Engineering, graduated from the University of Adelaide with a BSc in 1971 and a BE in 1972, and received his PhD from the University of New South Wales in 1976. He then went to the UK to work for Marconi Avionics on the design of computers for aerospace applications, returning to Australia after three years to work for GEC as technical manager of their automation and control division in the area of industrial robot design and installation.

In 1983, at The University of Wollongong, he established the University's Automation Centre with funding from Commonwealth and State Governments. This company has since installed several million dollars' worth of robotic and other automation systems in industry. Chris subsequently also founded the Australian Training School for Advanced Manufacturing (ATSAM). These were two of the first companies in the University's Technology Centre, which now consists of more than 20 companies.

As Professor of Electrical Engineering, he maintains research interest in robotic and power engineering and practical interest in the industrial activities of the Automation Centre and ATSA.

**Professor Gerry Freed**

Gerry Freed graduated with Honours in Physics with Electrical Engineering from the University of Manchester in 1958, subsequently training in computer design and programming. After management roles in marketing as well as research and development in laboratory instrumentation and banking automation, he started his own company in 1962.

This firm pioneered the introduction of word processing, manufacturing computer peripheral equipment, and carried out major development work in data communications. It attained a staff of nearly 200 and established a worldwide network.

When the company was sold in 1970 to a major British firm Gerry continued as managing director. His activities covered computer software, office automation and medical and scientific instrumentation.

In 1973 he came to Australia, where again he became involved in high-tech manufacture. His experience in the field of medical equipment led to his appointment as President of the Australian Federation of Medical and Biomedical Engineers as well as a council member of the Institution of Biomedical Engineers. He has served on a number of committees and advisory boards related to safety standards and industry interests. He is a director of the Illawarra Technology Corporation.
Professor John Goldring

Professor Goldring took up his appointment as foundation Dean and Professor of Law in The University of Wollongong in June 1990.

Born in Sydney in 1943, he was educated in state schools and received degrees in Arts and Law from the University of Sydney. An Australian-American Education Foundation Fellowship enabled him to complete a Master’s degree in Law at Columbia University, New York.

He worked as an articled law clerk and solicitor in Sydney and as a lawyer (in the areas of insurance and corporate finance) in New York, before accepting a teaching position at the University of Papua and New Guinea. Subsequently he held full-time teaching positions at the Canberra College of Advanced Education and the Australian National University and from 1981 until 1989 held a Chair in Law at Macquarie University. He was Head of the School of Law at that University from 1982 to 1987. He has held visiting teaching and research positions in the United Kingdom, Italy and Norway. In 1988 he was a Commonwealth Foundation Fellow. He has been a member of the Advisory Council on Australian Archives, the Board of Governors of the College of Law (NSW), the NSW Privacy Committee and the NSW Road Freight Transport Industry Council.

In December 1987 he was appointed a full-time member of the Australian Law Reform Commission for a period of three years. He is a joint author of two books, Consumer Protection Law in Australia (third edition) and Accountability and Control: Government Officials and the Exercise of Power.

Professor Clem Lloyd

Professor Clem Lloyd was appointed Foundation Professor and Head of the Graduate School of Journalism, and took up his position this year. He is a prominent journalist, author (notably with Andrew Clark – of Kerr’s King Hit), political adviser and academic. His work includes journalism in the field of urban and regional development. He has worked on the Australian Financial Review, the Sydney Morning Herald, the Sydney Daily Mirror and Truth.

Clem Lloyd was chosen from an outstanding list of applicants including top media people and academics from both Australia and abroad. He has a strong commitment to the training of journalists.

His political experience is considerable. He has been Press Secretary and Principal Private Secretary to such senior politicians as Bill Hayden, Tom Uren, Lance Barnard and Senator Ron Willesee.

Before coming to Wollongong Clem Lloyd was a Research Fellow in the Urban Research Unit in the Research School of Social Sciences at the Australian National University.

Professor Tony Parker

Tony Parker came to The University of Wollongong as Foundation Professor and Head of the Department of Human Movement Science from the University of Queensland where he was Head of the Department of Anatomy. His initial appointment at Queensland University was in a joint position in the Department of Human Movement Studies and Anatomy.

Professor Parker’s research interests are in the area of orthopaedic biomechanics, in particular the response of bones and ligaments to physical activity and the mechanisms of over-use injury.

Professor Parker is the immediate past President of the Australian Sports Medicine Federation and a fellow and life member of that organisation. He is currently Oceania representative to the Executive Committee of the International Federation of Sports Medicine.
Professor Raghu Nath Singh

Professor Raghu Nath Singh has taken up his appointment as Professor of Mining Engineering within the Department of Civil and Mining Engineering. He came to Wollongong from the University of Nottingham in the UK, where he was Reader in Mining Engineering. He has held positions with mining companies in India and the UK. In 1984 he was Visiting lecturer at Wollongong University. He lectured in a postgraduate course in mine water and gave occasional lectures in rock mechanics.

Professor Singh obtained his qualifications from Benares University in India and the Universities of Sheffield, Wales and Nottingham in the UK. He was awarded a DSc from Nottingham for his published work on Aspects of Stability and Safety of Mine Workings.

Professor Sandra Speedy

Professor Sandra Speedy has been appointed Head of the Department of Nursing in the Faculty of Health and Behavioural Science. (Other departments in the faculty are Human Movement Science, Psychology and Public Health and Nutrition.)

Professor Speedy gained her academic qualifications at the universities of Flinders and Adelaide and at the University of Rochester in New York in psychology, nursing and town planning. Her doctorate was awarded at the University of Rochester for a thesis entitled Faculty Development for Australian Tertiary Nursing – Perceptions of Heads of Nursing Programs.

Professor Speedy is a registered psychiatric mental health nurse in South Australia and has a deep interest in issues of women's health. She was appointed a foundation member of the Sturt College of Advanced Education nursing course in 1975 and served as Head of the Department from 1981 to 1983. After taking leave to pursue her studies she returned to the Sturt nursing program in 1987. She was there until the move to Wollongong.

Professor Nick Standish

Outstanding academic achievement by Professor Nick Standish has been recognised by the award of a University Chair – known as a Personal Chair in some universities.

Nick Standish was born in Yugoslavia where he attended primary schools and a Russian-language high school. After obtaining his HSC in Salzburg in 1949, he migrated to Australia where he began a career in metallurgy with the NSW Government Railways. He obtained in succession, DipMet (Sydney Technical College), BSc and MSc in UNSW and PhD (Otago). From 1961 to 1965 he was a lecturer in extractive metallurgy in the University of Otago. In 1965 he was appointed to the position of lecturer in Extractive Metallurgy at Wollongong University College; was promoted to Senior Lecturer in 1968 and to Associate Professor in 1972.

Professor Standish firmly believes that teaching is enhanced if the teacher is also active in research. Throughout his teaching career, Nick Standish has taught a wide variety of subjects and his research interests have likewise embraced many fields. He admits to having a soft spot for blast furnaces, in the research of which he has a long-standing international reputation. His current interest is in microwave applications to pyrometallurgy in which The University of Wollongong’s Microwave Application Research Centre is the world leader.
In the light of developments at the University of Wollongong in recent years, Jim Langridge, Vice-Principal (Development), was invited during a visit to Britain in March to review the restructuring of tertiary education in Australia. His address was made at the International Conference of University Administrators, which was held at the University of Exeter.

Over the past two years, Australia has experienced far-reaching changes in the structure of its higher education. The Minister for Employment, Education and Training, John Dawkins, has been a catalyst for change. He has championed the cause of institutional amalgamations, salary deregulation and the reintroduction of student fees.

In his address, Jim Langridge reviewed the impact of the changes on Australian universities. His paper was highly appropriate in the context of the present tertiary-education climate in the UK today, when funding and unified tertiary education systems are very much near the top of the agenda.

Mr Langridge outlined the way in which Wollongong University has embraced many of the changes made here, how the changes have in fact helped the University's development goals and provided opportunities for it to compete on more equal terms than previously.

This has, of course, been dependent upon the willingness of the University to make innovative decisions at a time when others perceived the most effective way of treating the changes was to adopt a conservative stance. Jim Langridge outlined the basis of the decisions taken in 1981 to ensure that the University would flourish. They were:

- complete as quickly as possible the amalgamation process, which had already begun, with the adjacent Wollongong Institute of Advanced Education;
- grow as quickly as was feasible during the 1980s; and
- establish a viable commercially orientated technology development operation through the formation of strategic alliances with business and industry.

It has been those decisions, effectively made a decade ago, which have guided the development of the University and which have successfully insulated it from needing to make forced, and to a degree reluctant, changes during the recent shake-up.

In the period of eight years, the University has moved from an institution viewing its role as to provide specific higher education for the service of its geographical region, through a period of establishment of independence, to that of an autonomous institution offering a broad range of academic services. It is today well on the way to becoming a major provider of higher education to international students.

Arising from the federation of the University with the Institute of Education eight years ago, Wollongong is one of the few universities not forced into an amalgamation in the round of changes brought on by the dismantling of the binary system.

For the second year in succession, one of the University's electrical engineering students won the BHP Trainee of the Year Award. David Irvine, a student enrolled in the BE in Electrical Engineering course within the Department of Electrical and Computer Engineering, was awarded the 1989 Bill Burgess Trainee of the Year Award at the BHP Illawarra Technical Society's Annual Dinner.

David attended Wollongong High School before joining BHP and embarking on his studies with the Department in 1984. Since that time he has worked on a variety of projects at BHP Sheet and Coil Division, where he is currently working with the process development engineers on the continuous galvanising lines, steering rolls, control and automation projects.

Last year, the final of his seven years' part-time program, David completed his thesis project entitled: Two Phase Resonant Link Inverter under the supervision of Dr Don Platt. He also completed a management elective which covers business and manufacturing management.
MANUFACTURING
IN AUSTRALIA

Günter Amdt

In the second week of July, the University of Wollongong will host the Fifth International Conference on Manufacturing Engineering (ICME-90), sponsored by the Institution of Engineers, Australia. Approximately 100 papers will be presented over three days by local and overseas speakers, offering an overview of Australian manufacturing engineering and management. An associated two-day program of short courses will complement this with latest news on current developments. The Conference will offer an opportunity to measure recent developments in manufacturing in Australia and expansion of manufacturing engineering activities at this university against future directions in national manufacturing industry.

Recent statistics on manufacturing technology '... paint a gloomy picture of Australian industry by indicating that most companies are using outdated technology and dragging behind their competitors in other developed countries...' [1]. Yet big improvements have been made in Australian manufacturing over the past decade; many of the proposals made around 1980 (notably by Wawn [2], for restructuring, export-orientation and industry education) have been fully or partly implemented.

Examples are national training efforts in CIM (computer-integrated manufacturing), TQM (Total Quality Management) and such other new concepts as VAM (value-adding management), MRP (manufacturing resource planning), and JIT (just-in-time) manufacturing.

Although only 15 per cent of Australian manufacturing establishments are estimated as actually applying these techniques as yet [3], the fact that a national survey on manufacturing technology statistics was made by the Australian Bureau of Statistics at all (and for the first time) in 1988 is in itself a positive sign, in that it establishes a base for possible modernisation.

Jones and Brown [4], together perhaps the two people best qualified to comment on Australian manufacturing industry today, also highlight recent achievements of the manufacturing sector, for example, as a significant export earner: an increase was noted from 38.4 per cent in 1985 to 44.9 per cent in 1988, an improvement of 17 per cent, in terms of ASIC-based manufacturing-to-total export contribution.

They summarise the main problems facing Australia’s manufacturing sector today as a severe shortage of 'top-class' people at all levels of manufacturing; difficulties in keeping up to date with technological and market developments; foreign manufacturing industry ownership (60 per cent); small size of high-tech innovative companies; political barriers to exports; lack of local support for Australian-made products; and lack of long-term planning.

Clearly, while 'external' restrictions exist, many of the problems in manufacturing are management- and people-based. This is substantiated by the 1989 Australian Manufacturing Futures Survey [5], which lists, in order of importance, the following ten main 'concerns in manufacturing' in 1989: strength of the Australian dollar, skills shortage, high material costs, achievement of high quality standards, new systems implementation, ageing plant and equipment, direct labour productivity, poor sales forecasts, direct labour absenteeism and indirect labour productivity. Among the 116 leading manufacturing companies surveyed, 'programs to improve labour productivity were indeed foremost in the action plans for the future,... with the introduction of automation and robotics still being resisted in many areas' [5].

There are other indicators of the national need to concentrate on improvements in manufacturing management and the quality and motivation/commitment of the manufacturing workforce. However, this does not imply neglect of product and/or technological improvement and innovation. And current manufacturing engineering developments at The University of Wollongong are aimed at equally satisfying both the human and the technical side of manufacturing.

The Faculty of Engineering at this University has been active in teaching and research related to manufacturing engineering for some years, mainly in the Depart-
ments of Mechanical and Electrical and Computer Engineering, supported by AEAC, the Automation and Engineering Applications Centre. In 1988 CAMIA, the Centre for Advanced Manufacturing and Industrial Automation, was formed on the initiative of the two departments as one of the federally-funded Key Centres for Teaching and Research, and activities in both these areas of manufacturing became more formalised.

Shortly after, CAMIA and the two departments, together with AEAC and its training arm AES (Automation Extension Services) and ATSAM (Australian Training School for Advanced Manufacturing), pooled resources to develop the computer-integrated manufacturing ‘ACME’ FMS (flexible manufacturing system), which will be operational by July 1990, that is, in time for ICME-90.

The system, located in the Illawarra Technology Centre, is based on Australian know-how and will not only be the most comprehensive demonstration FMS in Australia, but will also enable industry to supply workpieces/products for manufacturing trials. More importantly, it will form the state-of-the-art equipment base for a complete range of training programs from the operator/technician level to the professional manager/CEO level, offered jointly by ATSAM and CAMIA.

As a parallel development a gradually increasing number of ‘pure’ manufacturing engineering/management subjects form the ‘manufacturing stream’ within the undergraduate BE (Mechanical) degree. The aim is to offer a BE (Manufacturing) degree from 1992 onwards. These undergraduate developments will be accompanied by postgraduate diploma/Masters programs in Total Quality Management (1991), offered jointly by the Departments of Mechanical Engineering, Management and Mathematics, and Advanced Manufacturing (1992). On the manufacturing research side, two research programs exist, together involving about 30 mechanical and electrical/computer engineering staff: the University’s Advanced Manufacturing Technology (AMT) and Industrial Automation (IA) research programs, respectively.

These manufacturing engineering initiatives at The University of Wollongong address many of the problems facing Australian manufacturing, both at the undergraduate (long-range improvement) and professional or continuing education (short-term improvement) levels. They cover the human as well as the technical side of manufacturing: of the 13 professional short courses run by CAMIA in 1989, seven dealt with manufacturing management. Some 30 such one-day courses will be offered in 1990. Aimed at practising manufacturing engineers and managers, they will help alleviate what may indeed be the country’s main and inherent problem with manufacturing: the human element.

Basic factors such as lack of commitment, skill, dedication, motivation and discipline in the manufacturing workforce stand out as major differences when comparing the Australian manufacturing scene with that of, say, Germany or Japan.

There are, for example, still many management and manufacturing concepts and techniques which Australians can learn from the Japanese – as the rest of the Western world is learning right now – despite the large cultural and other differences, and without loss of national (and often artificial) pride. As a starting point, the application of ‘Kaizen’ springs to mind: people-based, steady, all-embracing, continuous improvement [6] in manufacturing.

And even the application of such simple but disciplined housekeeping rules as the ‘five Ss’ (seiri-seiton-seiso-seiketsu-shitsuke, meaning organisation, tidiness, purity, cleanliness and discipline) at the Australian workplace (and even at home and at the beach) could no doubt initiate major improvements in manufacturing.

All these and other such issues will be discussed at ICME-90. Although none of the problems facing Australian manufacturing may be solved there, delegates will at least be better informed about them, and it is hoped that directions and actions for improvement will be initiated. One such initiative will be the emergence of a unified national Australian Manufacturing Society, which has long been lacking.

Based on developments described above, another will no doubt be the establishment of The University of Wollongong as a significant base for Australian manufacturing engineering improvement. The country needs it.

Footnotes
SHOULD AUSTRALIAN STUDENTS SHOP NATIONALLY?

Lauchlan Chipman

Since 1 January 1990 the NSW-ACT region of Australia has boasted 11 publicly funded universities. It also hosts four campuses of a proposed Catholic University of Australia, built from publicly funded Catholic tertiary colleges in three states and the ACT.

This body is also considering applying for membership of what the Hon Mr John Dawkins MP calls the Unified National System of Universities.

In addition, there are proposals for at least two private universities in NSW, one in Sydney specialising in business, and one near Albury with an agricultural bias.

Thus by 1995 the strip of Australia between Albury, Armidale and the Pacific Ocean could well boast 14 universities, 12 of which are members of the Unified National System (UNS).

Though the probable growth in universities throughout Australia is unlikely to keep pace with NSW and the ACT, the best present guess is the UNS will soon contain at least 33 universities, supplemented by half a dozen or so that either do not seek or are not eligible for membership.

Already, some who recently lamented the shortage of university places in Australia, are now quietly wondering whether there will soon be an over-supply, likely to show up first in the NSW-ACT region.

A decline in the traditional university entry age cohort is expected by the mid-90s, and it may not be fully offset by increased retention rates and more vigorous recruitment of mature age and other 'non-traditional' students.

In consequence, student recruitment will become much more competitive, with the number of available places rising faster than demand from well-qualified school leavers.

Soon every Australian university will include marketing and promotion as major components in its planning process.

Throughout Australia university promotional activities are already becoming more overt and more professional.

But unless care is taken to persuade academic communities within universities that these developments are desirable, there is likely to be sneering derision from within.

Anything that makes a university look good threatens its poorer performers who, like the bad worker who blames the tools, traditionally blame the institution for their low productivity.

Paradoxically, the more compelling the promotional material, particularly on the issue of the university's quality and standing, the greater the incentive for the disgruntled within the institution publicly to attack it.

It is therefore imperative that universities alert their internal constituencies to the importance of developing sound marketing and promotion strategies.

Because these are essentially selective in those aspects of the university they highlight, care must be taken to convince those associated with the rest of the university's work that neither they, nor their work, are implicitly devalued.

When it comes to student recruitment, the four most common university strategies correspond almost perfectly with those favoured by commercial organisations in the service sector.

One is not merely to project information about courses, facilities, and so on, but also to present a distinctive and seductive image – in effect a 'brand name' differential.

A second is for some universities to find their own particular niche in the market, concentrating their promotional efforts on a few things they can easily demonstrate they do very much better than anyone else, even though their total array of programs may be less comprehensive than those of their competitors.

A third is to let consumer sovereignty rule, and shape the university to be flex-
This was Paul Ryan's third solo exhibition in Sydney and his work has been sold extremely well. DC-Art, Woollahra. Both Gabriella and Mandy Evans, a former painting student, held concurrent solo exhibitions in Sydney, including a group exhibition at Six' the exhibition features Audrey Bernays, Anne Ferguson, Kathryn Orton and Judy Weeks.

Mandy Evans, a former painting student, exhibited solo at the Adelaide Festival, while two other former painting students held concurrent solo exhibitions in Sydney: Gabriela Frutos at the Coventry Gallery in Paddington and Paul Ryan at DC-Art, Woollahra. Both Gabriella and Paul have sold extremely well. This was Paul Ryan's third solo exhibition in Sydney and his work has been included in various mixed exhibitions including the Blake (1989) and Sulman exhibitions (NSW Gallery, January 1990). Gabriela Frutos also exhibited in a group show earlier this at the Coventry Gallery. All these artists have work in the University Permanent Collection.

On campus the Library is the current focal point for hanging further works in the Permanent Collection: multi-media works including embroideries, hangings, original prints and paintings, including ten original lithographs by Idris Murphy created for the limited edition book 'The Heretic' designed and printed by the postgraduate student James Taylor, a large oil on canvas of a young man, appropriately reading a book and a delightful batik by Tjenka Murray.

John Eveleigh
New Dean welcomes University initiative

A lumni heading for middle age and beyond will be particularly interested in the University of Wollongong’s initiative in developing its new Faculty of Health and Behavioural Sciences with the basic philosophy that prevention is still better than cure. Already being trained in the faculty are health professionals in a variety of fields and programs which embrace the WHO (World Health Organisation) vision of health as essential to a full, happy and productive life, vigorous and free of illness, in a healthy physical environment.

This approach involves social, political and economic aspects of health care; graduates will be able to deal with all these factors in promoting the health of communities and individuals, as well as the consequences of accident, illness and disease.

Professor Christine Ewan is Foundation Dean of the new faculty. She came to Wollongong in 1986 with a background in medicine, medical education and work with the World Health Organisation in the Western Pacific Region. She developed the university’s post-graduate program in Community Health and contributed to the establishment of the Department of Public Health and Nutrition. She took up the position in February this year.

The departments in her faculty are Human Movement Science; Nursing; Psychology; and Public Health and Nutrition. They offer courses leading to the Diploma in Nursing and Bachelor degrees in Applied Science (Human Movement), Nursing and Science (Nutrition).

Professor Ewan sees the creation of Wollongong University’s Faculty of Health and Behavioural Sciences as a response to social, political and economic realities and a long-term initiative in focusing on optimising the quality of life of individuals and communities.

“We are really interested in health promotion, the social context of health and health care, as well as the other areas, the therapeutics and diagnostics of the situation”, Professor Ewan said.

Part of that thrust and emphasis is the recognition that health professionals work as teams. They really need each other very much and other kinds of professionals as well and they need the community itself.

“We face an increasing emphasis on the inter-disciplinary nature of health studies and one of the reasons we believe Wollongong is well placed to provide the training linked with research is that it is a small university with a great willingness to do cross-disciplinary work. We have enormous cooperation and goodwill from other faculties and departments. That is excellent. So we really want to maximise the appreciation of things like behavioural science, management, economics, sociology, multicultural studies. They are, I think, as much basic to health as biology and anatomy.

There is a uniqueness at Wollongong. We have that very close relationship with the Area Health Service. It is a two-way relationship. We don’t just use them for teaching. The research link is very good. Our palliative care study, for example, was generated by the Area Health Service. They were interested to know what their unit was actually achieving. We provided the academic expertise to develop that study and we are working on it together.

The fact that we’re working with a smaller community, not one of the major metropolitan centres, allows us to have a much closer relationship like that. One of our advantages is that Wollongong University doesn’t have a traditional medical school which would tend to dominate, set things in a mould that would be very traditional.

“We don’t have the same tendencies towards conservatism because we are new and because we don’t have strongly es-
tablished traditional health courses. That means we can be innovative, flexible. There is no other faculty in Australia with the combination of departments we have.

'That has been well planned. There is a real logic to it. We are talking about health, the environment, the way we live. That's got a lot to do with fitness, nutrition, public health, community based care, mental health. So all our departments really have a great deal to contribute to that and no one group is particularly dominant so there is no dominant professional model that drags most of us along with it. We all subscribe to that particular view of the world and how we are going to contribute to it.'

Professor Ewan began as a medical graduate who became interested in what was wrong with medical education.

'It seemed to me I wasn't trained to do the job I had to do when I graduated', she said.

'I then got involved in the study of medical education and did my PhD in this field in an attempt to look at how we train our health professionals.' She worked as senior lecturer in the World Health Organisation Teacher Training Centre for the Western Pacific Region in the medical faculty of the University of New South Wales for 11 years. At that time concepts were being developed in primary care and health promotion. These are now in operation.

Professor Ewan worked extensively in Asia and the Western Pacific, on the way picking up a Masters degree in Anthropology.

'It seemed to me the study of people and their communities was important in trying to figure out how we could help them promote their health', she said.

She experienced with the World Health Organisation the inter-disciplinary approach to health that she will be fostering at Wollongong.

Her faculty's foundation establishment is 68 full-time staff and 803 full-time equivalent students. Graduate schools are being introduced to the University and of the 803 students, 150 are post-graduate upgrading their skills or working towards master or doctoral degrees in areas such as public health, health services administration, psychology, movement studies and nursing.

'The graduate school is definitely going to expand', Professor Ewan said.

'The concept itself is meant to facilitate inter-disciplinary study and the staff of the graduate school will be drawn not only from departments of our faculty but also from other departments such as management and sociology.

In 1991 Professor Philip Barter, a researcher of international standing who is deputy director of Melbourne's Baker Medical Research Institute, will move to Wollongong to head the faculty's Graduate School of Health and Medical Sciences.

Professor Barter is expected to establish a research institute at Wollongong and accelerate the collaboration already established between the University and the region's Illawarra Area Health Service (IAHS). That collaboration took a major step forward early this year when the University, the IAHS and the NSW Government through its Health Department established a high-level working party to oversee plans to develop the partnership between the University and the health service.

The working party (which is yet to meet) has as one of its objectives the enhancement of the Illawarra's capacity to attract and retain clinical staff. One strategy for achieving this is to accelerate planning to secure full teaching hospitals status for Wollongong Hospital.

Granting full teaching-hospital status to Wollongong will be another quantum step for the region's health service. Wollongong Hospital is now recruiting internationally to staff its new radio therapy unit, with the hospital's first linear accelerator about to be installed.

'Professor Barter's particular strengths will help expand research capacity in biological aspects,' Professor Ewan said.

'We anticipate he will be establishing a research institute and we are collaborating very closely with the Area Health Service on that as a joint venture. The Area Health Service will devote some resources to it. Negotiations have been going on through a joint co-ordinating committee whose brief is to look at the needs of the service and the resources and opportunities available so we can better help each other to strengthen what we do.

'Potentially there is a large market overseas for our courses. A lot of countries in the Asia-Pacific area are looking for sources of training for their health professionals. We already have people in the faculty experienced internationally in that sort of market.

'The other big area is nutrition, coupled with the public health perspective. That is what is distinctive about our health nutrition program. It is different from others in that it takes a very positive public health and health promotion line as opposed to just the biochemical and biological approach to health and nutrition. That is the perspective sought after in parts of Asia and the Pacific; one emphasising the prevention of illness and health promotion.'
TOWARDS TEACHING LITERACY FOR THE 21st CENTURY

Literacy is a relative term. One hundred and fifty years ago literacy was equated with the ability to write one’s name and read a few verses from the Bible. At the turn of the century one was considered literate if one had completed between four and six years of schooling and passed a few exams along the way. During the forties and fifties the attainment of something called ‘functional literacy’ was considered to be the main objective of literacy education. As we approach the 21st century it is imperative that we reassess our position. What kind of literacy does Australia need to survive economically? Intellectually? Socially?

Should the focus still be mere ‘functional literacy’ (ie, enough to get by on)? Or should the nation be aiming for something more?

Once we’ve answered this question we need to address another: what is the most effective way of teaching the kind of literacy we finally decide upon?

The Centre for Studies in Literacy has been grappling with these two questions for some time now. The task of determining the kind of literacy needed for the 21st century is extremely value-laden. Like poverty, literacy is a social concept. As a society’s values change so do the meanings encapsulated by the words ‘literacy’ and ‘poverty’. With respect to the provision of literacy, there are political, cultural and moral dimensions, as well as instructional, which need to be taken into account.

Two members of the Centre, Jan Turbill and Brian Cambourne, have decided to get their values out in the open. They argue that if Australia is going to survive as a nation in the coming century, the majority of its school graduates must be educated well beyond mere functional literacy. Because they believe that language and learning (and understanding, and knowing, and thinking) are closely related, they assert that high degrees of literacy are possible only if learners have access to and control over as wide a range of language patterns and forms as possible. By this they mean that if one wants to understand science, think like a scientist and ultimately come to learn and know science, then one needs to have control over both the written and oral linguistic registers of the discipline we call science.

The same principle applies to other domains of knowledge and thinking. How does one ‘get control’ over the range of language forms which are needed for high-quality thinking and knowing? Cambourne and Turbill’s research shows that sustained engagement with those forms
of language through immersion in reading, writing, speaking and listening to such language is the simplest and most effective way of achieving that level of control.

For the past five years, they have been researching ways of helping teachers teach for this kind of literacy. The end product of their research has been the acquisition of knowledge and expertise in the design and delivery of teacher development ('in service') programs which is beginning to pay off in terms of raising funds for further research and development.

In 1988 Turbill and Cambourne received a grant from the Federal Government to develop and trial an in-service program which would help secondary teachers from all discipline areas to be more effective teachers of the reading and writing skills and knowledge which their respective subject areas demanded of students. This project resulted in the Secondary Literacy In Service Course (or SLIC). Since its publication in late 1989, this course has been purchased by so many schools that it is already into a third print run. Furthermore, it has attracted overseas interest. New York State Department of Education has adopted it and has purchased a licence to print and sell the course to the secondary schools for which it is responsible. Cambourne and Turbill recently spent three weeks in New York State training co-ordinators to run SLIC. The probability of other states in the USA purchasing a licence to use the SLIC program is high.

More recently (1989) the Centre has been commissioned to develop and trial an intensive in-service program for American teachers in the grades 4-8 range. This project, which has been entitled 'Frame-works', is probably the most ambitious the Centre has so far undertaken. This is a joint venture between the Centre (in association with UniAdvice) and the Wayne-Fingerlakes school district in New York State. The budget for the first year of this project is over $100,000. Similar budgets are predicted for future years. When completed, this program will have the potential to generate a steady income for the Centre's future research and development plans. Given the current rate of exchange, it has the potential to attract post-graduate students from the USA.

FACULTY OF INFORMATICS ESTABLISHED AT WOLLONGONG

Informatics' is described in one dictionary at least in terms which could be considered by semantic purists among Wollongong alumni to be vaguely pejorative. According to one dictionary, the term means 'a discipline of science which investigates the structure and properties of scientific information as opposed to content'.

When it is realised, however, that the new Department of Informatics at the University embraces the departments of Computer Science and Electrical and Computer Engineering, as well as the Department of Mathematics – the last the language in which most scientific information is written – the ambiguity in the title is resolved. In past months, both the telecommunications and the computing sides of informatics have had a substantial fillip in Wollongong.

In addition to a telecommunications software centre for the Corporate Consumer Division of Telecom Australia, The Nortel Technology Centre for Northern Telecom – a Canadian-based international company – has been set up in the University's Technology Centre. Associated with the new faculty are the University's Automation and Engineering Applications Centre, the Centre for Information Technology and the research programs in Engineering, Knowledge-based Information Systems and Industrial Mathematics and Applied Statistics.

In addition, there are individuals with international reputations in areas as diverse as Image Processing, Oceanography and Logic.

Students will have available all the subjects previously provided by the three departments in the Faculties of Mathematical Sciences and Engineering.

Among the degrees to be offered are Bachelor of Mathematics, Bachelor of Engineering (Electrical and Computer Engineering specialties) and Bachelor of Information Technology and Communications.

The last is managed by a special unit within the Faculty and involves a study of information technology as well as its social content. The Faculty will be considering the formation of new courses at undergraduate and graduate levels.

THE CO-OPERATIVE EDUCATION PROGRAM

A joint venture between industry and The University of Wollongong

The University of Wollongong has a history of association with industry, particularly in the Illawarra region. In recent years working relationships have been strengthened and widened through the University's Illawarra Technology Corporation.

The decision has now been taken to extend relationships through a co-operative education program which will offer scholarships donated by industry to outstanding students to undertake degree courses combining a rigorous academic program with a relevant professional work experience component.

The University has appointed Dr Brian Gillett and Mr Ron Robertson to work on the establishment and implementation of the program.

Students selected will receive a tax-free $9,300 per annum scholarship for the duration of the degree course. Students will have significant periods of work experience with different employers engaged in a field of enterprise related to their academic course work and their career aspirations. Students will obviously benefit from the practical experience and gain a clearer perception of the workplace and their chosen career path.

The Co-operative Education Program will be introduced for the 1991 academic year. Initially the program will be designed for undergraduate students. Graduate programs will be addressed once the program is well established.
Wollongong University prides itself on paving the way in many technological areas – but it is also a leader in international relations.

The University was one of the first tertiary institutions in Australia to establish an international office to recruit and support the growing numbers of overseas students coming to this country to study.

And judging by the 750 international students presently on the campus the early work done just over two years ago has been successful.

Students are from India, Pakistan, Sri Lanka and Malaysia. There are also students from Thailand, Taiwan, Japan, the USA and even Iran. The list is sure to grow. As well as ‘importing students’, the international office is also intent on ‘exporting’ students on exchange programs. Already, there are exchange schemes with the USA and an agreement has just been reached with the Gajah Madah University in Indonesia.

Great Britain, several European countries and Japan look set to be next to join the international network.

The development of the international office began in 1987 when the then Deputy University Secretary – now Vice Principal (Development), Jim Langridge, began seeking overseas students following major changes, mostly in the financial area, to the regulations governing such students.

Late in 1988, as numbers of students began increasing and further government policy changes were instituted, the university enlarged the program and appointed former diplomat and overseas education policy specialist Eric Meadows.

Eric, who grew up in Sydney, came to the University from Canberra where he worked with the Education Department in overseas student policy.

He also spent 14 years as a diplomat in India and Israel before joining the Education Department working in the international field in 1985.

Because of the early work the University was prepared, late in 1988, when the government announced it would replace the subsidised scheme with full-fee paying students.

Universities had no choice but to recruit international students. Eric stresses that these students do not take places away from Australian citizens and residents. If the university did not take overseas students there would still be not one more Australia student on the campus.

While the University has to replace the dollars lost with the end of the subsidisation program, its higher aim is to create a diverse and rich educational environment for the Australian students.

Since Illawarra traditionally has been disadvantaged educationally, the University hopes that its policy will give opportunities for local students to meet other nationalities, experience different cultures and perhaps take part in exchange programs to broaden their experience. ‘Bringing the world back home’, is how Eric Meadows describes it.

According to Eric, the University wants to stimulate Illawarra-based students, and it also consciously employs academics from all over the world to do so. It is internationalising the syllabus and expanding its exchange programs to make this a reality.

Eric travelled to the Middle East in May to promote the University. After that the international office will embark on further developing its support systems for the students already here. The University already has a full-time overseas students counsellor, a part-time psychologist / counsellor and a full-time accommodation officer.

The English Language Centre provides tuition for students, some of whom need intensive work for up to a year, before the University allows them to begin their course.

Support for English language learning is a major issue Eric is addressing at present.

Interest in the University as a place of not only high academic standard but also as a pleasant place to study is one of the main attractions to overseas students, according to Eric. When he promotes the University he promotes the city too.