

CAMPUS NEWS

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T.E.C. REPORT TABLED.

Volume 2 of the T.E.C. Report for 1979-81 Triennium was tabled in the House of Representatives on Thursday, September 21st. This volume is the one that gives precise recommendations for the grants that should be made to individual Institutions for 1979. Copies have been distributed to, or have been ordered for, appropriate Officers of the University. Meantime, the Registrar and the University Librarian each has a copy available for perusal. The Vice-Chancellor, Professor L.M. Birt, has supplied Campus News with this summary of salient points from the Report.

It is important to sound a note of caution. Although the recommendations of the Commission are consistent with the Government's own guidelines, it should be noted that the role of T.E.C. is to make recommendations and that its recommendations are not automatically accepted. The status of what follows is therefore that of recommendations, not of Government decisions.

Student Load. T.E.C. recommends that the University of Wollongong should work to a student load in 1979 of between 2,300 and 2,400. The previous approved figure for the University of Wollongong was a student load in 1979 of 2,190. The recommendations therefore are for an increase of between 110 and 210 student load. (This is presumably a recognition of the fact that the University of Wollongong, unlike most Australian Universities, over achieved its student load in 1979; and presumably is a response to the University's arguments that it can - and should be allowed to - grow further than previously proposed. This carries a further implication that it is important for this University to ensure that it does maintain its planned student load).

Price Base. Unless stated, all the recommendations are based on December 1977 cost levels.

Recurrent Grant for 1979. The T.E.C. recommendation is for a recurrent grant of \$10,660,000. The actual figure for 1978 is \$9,793,000. The recurrent grant recommended for 1979 is roughly half-way between the limits earlier suggested by the Vice-Chancellor as the best and worst possible situation for 1979. (The Vice-Chancellor's earlier analysis suggested that the University might expect something between \$10,193,000 in the worst possible case and \$11,020,000 in the best possible case). It should be noted however that this recurrent grant is based on a planned student load of between 110 and 210 more than previously planned.

NOTE:- Therefore the recommended increase of 8.8% in the recurrent grant must service an increase of between 8.5% and 13.2% in the planned student load.

Equipment Grant 1979. The T.E.C. recommendation is for an equipment grant of \$620,000. The actual grant for 1978 is \$687,000. It should be noted however that in 1978 there is an earmarked allocation for library books and materials within the recurrent grant and that that earmarked grant ceases at the end of 1978. The University has therefore been recommended for a substantially greater equipment grant in 1979 than it had previously expected. In this respect the following extract from the advice of the Universities Council is relevant:-



Professor L.M. Birt. (Above).

"The University of Wollongong, Deakin University and the James Cook University of North Queensland have been receiving substantial earmarked grants to build up their library operations. In each case, the earmarked grants, which are due to terminate in 1978, constitute a major part of the total equipment grants of the universities concerned. The Council does not intend that these earmarked grants should continue beyond 1978. It recognises, however, that the needs for which they were originally provided still, in part, exist and has therefore included some general provision within the 1979 equipment grants for these universities as a contribution towards these needs."

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Special Research Grant 1979. The T.E.C. recommendation is for a special research grant of \$65,000. This compares with \$66,000 in 1978.

Student Residences Subvention for 1979. The T.E.C. recommendation is for a grant in respect of student residences of \$45,000 which is the same as for 1978.

Capital Programme for 1979. In relation to the capital programme four points need to be noted:-

- (i) Social Sciences Stage II. T.E.C. recommends that construction of the Social Sciences Stage II at a total cost of \$2,313,000 should commence, with \$1,000,000 being spent during 1979.
- (ii) Minor Works and Site Services. T.E.C. recommends that the University of Wollongong have \$200,000 for minor works and site services. This compares with \$218,000 which was available in 1978.
- (iii) Project Design of Future Buildings. T.E.C. recommends that \$300,000 be made available for project design work by all universities in Australia on future buildings. Within the list of buildings on which it recommends funds be made available is the Science Building for the University of Wollongong.
- (iv) Reserve List. T.E.C. has recommended a reserve list of three University building projects on which construction might commence in 1979 if the Federal Government, as the Minister for Education's earlier statements suggested might be the case, was able to find some additional funds for building projects in 1979. One of the three Australian University building projects so listed is the University of Wollongong's Science Building.

Future Action. Necessary future action is as follows:-

- (i) The Budget Advisers Committee will meet in the near future to discuss with the Vice-Chancellor provisional allocations for a global budget and to recommend to the Vice-Chancellor on action which might be taken before the Government's response to the T.E.C. recommendations is available.
- (ii) The Vice-Chancellor will consider what action, if any, can be taken before the Government response to the T.E.C. recommendation is available.
- (iii) These considerations will include whether and to what extent the minor works allocation should be supplemented from recurrent grants, and the extent to which the additional funds recommended for equipment should be applied to further allocations to the Library.
- (iv) When the Government's response is available, the Vice-Chancellor will prepare a budget for Council.

Funds in 1980 and 1981. Volume 2 of the T.E.C. Report for 1979-81 Triennium is restricted to recommendations for 1979. It should be noted however that, under the Government's Guidelines, there will be little or no increase in the grants available for the whole University system in 1980 and 1981. In relation to general recurrent grants, however, there is a comment which suggests that it is possible that there might be some very limited improvement in the level of response to the needs of this University. Section B68 of the Universities Council Advice reads as follows:-

"University of Wollongong. In its Report for 1977-79 Triennium (paragraph 7.13) the Universities Commission included in its recommended general recurrent grants for the University of Wollongong provision to raise the level of funding of the University by 1979 to a level comparable with other universities; the Council continued to make provision for this in Recommendations for 1978 and has made further allowance in 1979. Due to the shortage of available funds, however, it may be some years before full comparability is attained."

It must be recognised however that this comment must be balanced against the expectation that the University system as a whole will in real terms have less money in the years after 1979.

NEW APPOINTMENTS

Mrs. Pauline MacKay and Miss Carol McWaide have taken up limited term lecturing appointments in the legal studies field within the Department of Accountancy as from second session 1978.

Mrs. MacKay holds the degrees of Bachelor of Arts and of Bachelor of Laws (Hons.) from the A.N.U. In the final year of her course she was awarded the George Knowles Memorial Prize for the "Best Academic Work in Law" in the Law School. She was also awarded the Ansett Air and Space Law Scholarship for 1st place in Air and Space Law at the A.N.U. Mrs. MacKay is married; has three young children and has practised Law in Sydney and Wollongong.

Miss McWaide is a Barrister At Law and holds the degrees of L.L.B. and L.L.M. (Sydney). Her special academic interests are in the fields of Constitutional Law and Torts. She is a keen sportswoman and has played tennis for Sydney University. Currently she is writing a book on Juveniles and The Law.

Dr. H.J. Spencer has taken up his appointment as lecturer in the Department of Biology. Dr. Spencer, who is a neurophysiologist and neuropharmacologist, graduated B.Sc. in Biology from the A.N.U. and obtained his Ph.D. at Winnipeg, Canada. He spent three years post doctoral studies at Irvine, California.

Dr. T. Grant will join the Department of Biology in January, as lecturer in Ecology.

BACHELOR OF MATHEMATICS DEGREE OFFERED

From 1979 students at the University of Wollongong will be able to enrol in the Degree of Bachelor of Mathematics. This will bring to six the number of first degrees offered at Wollongong, the existing degrees being Arts, Commerce, Engineering, Metallurgy and Science.

The Acting Chairman of the Department of Mathematics, Associate Professor D.J. Clarke, in announcing this said that the University Council in resolving to introduce the new degree noted that many Universities throughout the world are recognising the broadening of mathematical applications from the traditional Sciences into the Social Sciences. Wollongong followed this trend by establishing a Faculty of Mathematics with its own Schedule of Subjects, but now believes it is time to go one step further.

Professor Clarke said that the mathematics specialist at the moment can graduate Bachelor of Science without taking any traditional science subjects and with an identical course pattern to the student who chooses to take out an Arts degree. Council agreed that this anomaly would be resolved by the introduction of a degree of Bachelor of Mathematics.

"It was also felt that the new degree could be advantageous for graduates seeking employment in the mathematics field. A survey of existing Mathematics students had shown that almost all those currently planning to take out a Bachelor of Science degree under the existing regulations were in favour of the establishment of a Bachelor of Mathematics degree," he said.

A Bachelor of Mathematics Honours degree will also be available.

Professor Clarke added that an explanatory Faculty of Mathematics handbook, which gives details of the new degree and background to the study of mathematics, generally is available on request from the Departmental Secretary, Department of Mathematics.

A.N.Z.A.A.S.

Three members of the Department of Geography of the University expect to attend the 1979 A.N.Z.A.A.S. Congress to be held at Auckland University, New Zealand, from January 22 to 26 1979. They are:-

- a) Professor M.G.A. Wilson, who has offered a paper entitled "Age Structural Adjustments in the N.S.W. Urban system 1966-76."
- b) Dr. E. Dayal, who will report on "Fragmented Farms in the Wheat Belt of N.S.W." and
- c) Dr. C. Keys, who will present a preliminary statement on his research into the "Rural Ecology of N.S.W."

This will be the 49th Congress of A.N.Z.A.A.S. and will have as its theme "Directions For the Future." At least 3000 delegates are expected to attend.

CONFERENCE ON ITALIAN CULTURE.



Heading a lively discussion session at Wollongong, from left, Mr. G. Cresciani, Board of Adult Education, University of Sydney; Professor C.A. Price, Dept. of Demography, A.N.U.; Dr. Paolo Totaro, Chairman, Ethnic Affairs Commission of N.S.W. and Professor R.B. Leal.



Above: Dr. Vincent Cincotta addresses the delegates.

The First Australian Conference on Italian Culture and Italy Today was held at Sydney and Wollongong Universities from 27th to 31st August, 1978 under the auspices of the Frederick May Foundation for Italian Studies. The purpose of the conference was "to provide an international and inter-disciplinary forum for the study and interchange of ideas on the political, cultural and social conditions of present day Italy and their historical roots".

The delegates (approximately three hundred) were welcomed by His Excellency the Italian Ambassador, Dr. Paolo Molajoni, at the Inaugural Dinner held in the Refectory at Sydney University, and began, what was to prove a most rewarding and academically stimulating conference.

The first day, with its theme of Politics, Culture and Society in modern Italy, perhaps proved to be the most exciting, with some of the leading political figures in the academic world of contemporary Italy sharing their knowledge and careful insight into her "problems".

The second day, with its theme of "Italian Cultural and Political Traditions" began with Prof. John Scott, of the Italian Department of the University of Western Australia giving a paper on "Anglo-Saxon criticism and the renewal of Dante studies". Such studies had been revived in the 1950's largely through the work of Auerbach and Spitzer, with a closer reading of the text, and the awareness of Dante's addresses to the reader, which established a new relation-

ship between Dante and his audience. The day ended on a note from the opposite end of the literary road with Adriano Spatola's paper "Italian new avant-garde poetry from the 60's to tomorrow."

On Wednesday, the delegates were guests of the University of Wollongong and were welcomed by the Vice-Chancellor of the University, Professor L.M. Birt, and by the Lord Mayor Mr. Frank Arkell. The convenor for the day was the Hon. A.J. Grassby, Commissioner for Community Relations; the theme: Italy and Australia. Dr. Vincent J. Cincotta of the Department of European Languages presented "The Italo-American experience: a model?" providing the audience with a thought-provoking picture of the condition of Italians in America at the beginning of the century. Professor G.A.A. Comin of Flinders University provided amusing examples of the Austro-Italian "dialect", a subject which was brought up again in the round-table conference chaired by Professor R.B. Leal. For the many visitors, approximately 300, both from Australia and overseas (9 from 6 different universities in Italy, 1 from Yale University, U.S.A.) the day provided a delightful change of environment.

The last day of the conference continued the theme of the preceding day, and the suggestion was put forward that an Australasian Cultural Studies Institute be established in Italy. The idea was received enthusiastically and provided a suitable end for this First Italian/Australian Cultural Conference.

VICE CHANCELLOR REPORTS ON HARVARD VISIT.

In the American late summer, I visited the State of Massachusetts, one of the original thirteen revolutionary colonies, and, at its great University of Harvard, I found the air redolent with proposals for democracy and reform. For the second time since the end of World War II, Harvard is revising its undergraduate curriculum. In 1945-46, Harvard issued what has become known as the "Red Book", a report entitled "General Education in a Free Society". The Red Book prescribed a curriculum aimed at achieving a balance between specialised studies and the general preparation of the educated person and responsible citizen. However, there is a second balance, that between prescription and free choice, which has not been well regulated either within American education as a whole or in the development of Harvard's general education programme. On one side is the prescribed curriculum, the unchanging requirement for general education built into the Harvard system in the 1940s and, on the other, is the increasing number of non-departmental, non-specialised courses from which the students make an often uninformed choice.

The current problems in Harvard's undergraduate programme were identified in the 1975-76 Dean's Report of the University's Faculty of Arts and Sciences. The Dean, Professor Henry Rosovsky, stated that the prescriptions, the degree regulations, did not "articulate educational priorities" and provided no focus for the proliferating undergraduate courses. Consequently, the Faculty of Arts and Sciences examined the possibility of changing the programme for "general education in the free society"; it sought to set the priorities that would, in turn, give shape and purpose to the programme. To determine these priorities, the Faculty had to face the implications of the latter half of the Red Book's title. Harvard's subscription to the democratic idea of the "free society" had produced an admissions policy that allowed entry solely on the basis of academic merit. As a result, the Harvard students were a heterogeneous group arriving, as Rosovsky observed, "unevenly - sometimes inadequately - prepared". They had been brought up in McLuhan's "global village", a free society no longer as certain about its freedom as it had been in 1945 and no longer as capable of reaching a consensus about the qualities of and qualifications for citizenship and meaningful life in that society. The Harvard Faculty was, therefore, dealing not only with "uneven" preparation but also with ill-formed aspiration, in other words, its undergraduates were "innocents abroad" in the complex world of the last third of the twentieth century. Here, in the appraisal of today's student, the Faculty saw the first clue to solving the problem of priorities for general education. The Faculty needed to acquaint its students with the basis "languages", skills and modes of thought and behaviour that would equip them to ask questions, to explore further, to make informed judgements and to view their experiences in a broad context. If the Faculty's first clue came from the present, its second came from the past, from the medieval concept that the essence of full humanity is "wholeness" and from Newman's model of the "educated" man. In his Report, Dean Rosovsky catalogued six attributes of the educated man and among them is a key facility - the "critical appreciation of the ways in which we gain knowledge and understanding of the universe, of society and of ourselves". Rosovsky's list of attributes and the analysis of the contemporary student population suggested priorities for both content and objectives. Working from these bases, the Faculty of Arts and Sciences resolved to "abandon the old trinity of 'Nat. Sci., Soc. Sci. and Hum.', and to establish, in its place, a broadly based core curriculum", a statement of aims and a revised definition of the basic requirements for "general education in a free society" of the late twentieth century.

The structure of the University of Harvard assisted the move to a core curriculum in that it has one, identified undergraduate school - the Faculty of Arts and Science - and a graduate school. Professors and students are encouraged to minimise the difference and the distance between the two levels of instruction. There were structural difficulties also, however, for, as Rosovsky points out, the University recognises, particularly in its financial arrangement, "the primacy of disciplines and the pull of departments" which "inevitably make much more difficulty a focused treatment of, or long term commitment to general education". Despite this centrifugal tendency which has long been recognised as a threat to general education, Harvard is relying upon a three to one faculty vote in favour of the introduction of a core curriculum in September 1979.

The curriculum will be phased in over a four year period and, subject to faculty review and approval during the 1982-83 academic year, it will become fully operative in September 1983. The core curriculum and the core requirements, together with other non-concentration (that is non-specialised or non-major) requirements, will be developed during the four year transition period.

The first aim of the core curriculum is "to have students acquire basic literacy in the major forms of intellectual discourse". The Faculty has identified five major forms: literature and the arts; history; social and philosophical analysis; foreign languages and cultures, and science and mathematics. These five forms will be composed as follows:

Literature and the Arts. Three half courses aimed at developing "a critical understanding of how man gives artistic expression to his experience of the world". The courses will give precedence to the written word and will examine a particular genre such as comedy or tragedy; fine arts and music, and, in an interdisciplinary study, the social, historical and economic context of literature and the arts during a particular movement such as Romanticism or in a particular time and place.

History. Two half courses that will "attempt to lead students to an understanding of the complexity of human interaction in specific situations in the past". The first course will focus on "historical orientation to the present" through, for example, the analysis of a modern political ideology, and the second course will examine "historical process and perspective" and consider, in context, events like the English Civil War and the Protestant Reformation.

Social and Philosophical Analysis. Two half courses aimed at "some understanding of an experience in thinking about moral and ethical problems so that they (the students) may make an informed judgement which enables them to make discriminating moral choices". The first course will apply "a formal body of theory and of empirical data to an understanding of some fundamental aspect of individual or social life in contemporary society" and the second will investigate "significant and recurrent questions of choice and value which arise in ordinary political and moral experience".

Foreign Languages and Cultures. One half course that will attempt "to expand the students' range of cultural experience and to provide fresh perspective on his or her own cultural assumptions and tradition". The students will choose between a study of an important aspect of a major Western culture, using the language of that culture, and a study of a non-Western culture where texts would be read in translation.

Science and Mathematics. Two half courses that will acquaint students with the basic principles of, firstly, the physical sciences and mathematics and, secondly, the biological and behavioural sciences. Students will be introduced to science as a way of looking at man and the world, and will be made familiar with quantitative reasoning and skills.

The core curriculum is not a first year course but, instead, the equivalent of a one year commitment spread over the four years of the Harvard undergraduate degree programme. The "core" will be accompanied by "non-concentration", basically remedial, courses, in expository writing and mathematics, that will have to be completed successfully by the end of the student's first year. Competence in mathematics is regarded as a pre-requisite for core science courses. The core curriculum will not disrupt the present structure of the undergraduate programme: two years will still be devoted to the major or "concentration" subject and one year to elective courses chosen from other fields. Students will be required to take no more than eight half courses, from the ten listed, to meet the core requirement whereas, in the present general education system, they have to choose eight, virtually at random, from a huge range. They will be exempted from one or two half courses in the core area overlapping their major subject and, in compensating addition, departments may permit specific core courses to count toward concentration requirements where appropriate. These arrangements will pare down further the total number of required courses in the core.

The value of the core curriculum can perhaps be best judged in the light of the debate between its proponents and its critics. Among the critics are those commentators, particularly students, who are disenchanted with what they see as irrelevant introductory courses that cover ground already traversed in upgraded secondary school courses. The United States, unlike the U.K., Europe and Australia, does not regard its secondary schools as the providers of general education. In the last few years, the schools have assumed some of the pretensions of their British and European counterparts, but Rosovsky has stated that secondary school students are simply too immature to benefit from the general education programme. In his 1975-76 Report, he asks: "Does not the great danger lie in producing young people who believe themselves to be educated, when in reality they have succeeded only in absorbing a few platitudes?" He is speaking here of the college graduate but his challenge can perhaps be referred more pointedly to the schools in which young minds are largely not ready for an introduction to refined techniques of analysis and criticism. Quoting a nineteenth century master of Eton, Rosovsky affirms, as the chief aim of the core curriculum, not so much the acquisition of knowledge as the ability to make "mental efforts under criticism". Another criticism of the core curriculum - that imputing a lack of depth - has been answered in a similar fashion.

Some maintain that general education is, by its nature, superficial. Rosovsky replies: "It is the quality of instruction, not the number of courses, that guards against superficiality". If this instruction is the fine-tuning of the maturing intellect it is profound in both intent and result. An understanding of the value and uses of the intellect, what Newman believed to be the primary bequest of a university education, cannot, in Rosovsky's view, be provided by: "a one-sided or specialised curriculum alone, nor by a system of general education that is unfocused and relatively unstructured". One criticism that may be well-appreciated by the Harvard Faculty over the next four years is the difficulty of framing courses when information, knowledge and techniques are constantly multiplying. It has been predicted that, the rate at which new information is accumulated will increase sevenfold in the next ten years. By laying down its five core areas the Faculty has established parameters within which it can adjust courses. The courses are flexible and, most importantly, selective. There will be no attempt to cover every historical event in the History area; a study of the Thirty Years War, for example, can develop skills in historical criticism and perspective. The emphasis again is on intellectual skills and not on content.

The core curriculum is challenged by staff invoking the academic prerogatives of individualism and professionalism. To work successfully, the core requires academic co-operation, the participation of highly skilled teachers, and the recognition by teaching staff that the cultivation of the educated person is a common goal. To assert other claims centered on individuals or on individual disciplines, is to deny the university's prime role - that is the development of a unified range of intellectual skills in the maturing mind of the undergraduate student.

Harvard's core curriculum has been designed to provide a focus for its undergraduate programme and to revitalize the mission of its undergraduate faculty. The Faculty of Arts and Sciences has faced the problems of soft options, costly multiplication of courses, and declines in the basic literacy and numeracy of graduates. It has re-affirmed that the aim of university education is cultivation of the intellect and has set down five basic areas in which that intellect can be awakened and exercised. The graduates of the Faculty's new undergraduate programme are intended to be educated persons who are informed and articulate and who know how to criticize and how to take action. The Faculty has attempted to save them from being side-tracked into spheres that are too narrow to yield any sense of perspective and into areas that are too indeterminate and vague to offer any direction or sense of purpose. These dangers are as evident in Wollongong as they are in Cambridge, Massachusetts and I hope that this University will seriously consider the Harvard response. This institution has always worried about its identity as a university and has become increasingly concerned about the standards it is setting for both entry and graduation. Contemplation of our institutional navel has achieved little and I would suggest that it is time to look outward to Harvard's core curriculum as the model for a plan of action that both reasserts the unique nature of a university education and sets priorities for the contributions of both staff and students.

FRANK KNOX MEMORIAL FELLOWSHIPS

The President and Fellows of Harvard College have announced that two Frank Knox Memorial Fellowships will be made available to enable two students from Australia to spend the academic year 1979-80 at Harvard University.

The value of the Fellowships is \$3,800.00 per annum. Tuition fees will be met in addition to the stipend.

Candidates who require a travel grant should apply to the Australian-American Educational Foundation (through the Department of Education) before 31 October.

The Fellowships are open only to candidates now enrolled as students who:

- (a) are British subjects and Australian citizens; and
- (b) have recently graduated, or are about to graduate, from a university in Australia.

No application will be considered from a student already in the United States, or from a student who already holds a doctorate.

The Fellows will be required to devote a major portion of their time to study in one of the Schools of Harvard University, viz Arts and Sciences (including Engineering), Business Administration, Design, Divinity, Education, Law, John F. Kennedy School of Government, and Public Health. The University will try to arrange a course suitable to the requirements of each Fellow.

In accordance with the Deed of Gift, special regard will be given to personal qualities.

The academic session at Harvard begins in early to mid-September and ends in late May. Fellows will be expected to arrive at Harvard in early September 1979 so that all final arrangements may be made for their residence and courses.

Applications must reach the Registrar of the applicant's university by 27 October 1978.

The University is requested to transmit applications (placed in order of merit) with an appropriate recommendation to the Secretary, Australian Vice-Chancellors' Committee, for consideration, to reach him not later than 13 November 1978.

For further information, see the Student Inquiries Section.

UNIVERSITY HOLDS SCHOOLS DAY.

The University acted as host to over 400 H.S.C. candidates on Friday, August 25th. The students, who came from as far afield as Narooma, were taking part in the fifth Schools Day organised by the University.

This year they were offered an expanded programme. Most of the University's 21 departments staged presentations which ranged from formal lectures to films, video tapes, tours of laboratories, demonstrations of equipment and discussions led by staff and existing students. In addition, there were hourly conducted tours of the library, talks by the Counsellor on career choices and illustrated talks by a representative of the Tertiary Education Assistance Scheme on financial assistance for students.

For the first time other elements of university life were on display. The Students Representative Council gave a presentation entitled: "There's More to a University Than Just Learning" and the Union Activities Officer gave brief talks on Union and Sports Association activities and introduced demonstrations of macrame and Tae Kwon Do. The S.R.C. also provided a lunch time concert for the visitors.

The Schools Liaison Officer, Mr. Tom Moore, has reported that on subsequent visits to schools a considerable number of senior students has reported favourably on the scope and diversity of the day's activities and expressed their intention of enrolling at Wollongong University in 1979.

Right: Visiting H.S.C. candidates enjoy the S.R.C.'s lunch time concert.



Above: Schools Liaison Officer Mr. Tom Moore meets three visiting students.



EUROPEAN LANGUAGES

The Department of European Languages held a Schools Day on September 15 which was attended by approximately 400 students from Years 10, 11 and 12.

The day began with an address by Professor R.B. Leal, who explained the orientation and distribution of the programme, the language studies offered at the University and outlined programmes and career options.

The day's activities included the showing of films and slides from France and Italy, a tour of the Library and a photographic exhibition and a tour of the Language Laboratory. There were addresses on various aspects of French and Italian culture - including one on the Mystique of French Cuisine, presented by Dr. D. Hawley and one on French popular Songs by Dr. A. Chamberlain.

Distinguished visiting lecturers included M.H. Le Porz, Cultural Counsellor from the French Embassy who spoke on "How to get to France", Mr. P. Bourlon, Pedagogical Adviser in French for N.S.W. Education Department and Mr. Paolo Nocella from Alitalia on Travel to Italy.

GEOGRAPHY

On July 28 the Department of Geography played host to some 450 year 12 geography students from high schools in the Wollongong-Nowra district at the first of its Schools Days for 1978. Three weeks later a similar event was staged in Goulburn for some 200 students from High Schools on the Tablelands (Moss Vale to Crookwell).

As in previous years each day took the form of a series of five forty-five minute lectures on topics relating to the H.S.C. syllabus, reflecting so far as possible the expressed preferences of school teachers in the region. That 'full houses' were experienced throughout each day - so full in fact that on campus there was not even standing room in either of the two theatres used and in Goulburn an emergency change of venue, from the Conference Centre to the High School hall, was required on the morning of the event - speaks volumes for the perceived utility of the programmes by teachers and students, a view further supported by comments volunteered by participating teachers.

During the lunch break of the campus day a light luncheon was provided for some 30 high school geography teachers giving departmental staff a useful opportunity to meet with a broader cross section of the teaching profession than we usually see.

Whether departmental enrolments are at all affected by these activities is problematical. What is clear, however, is that they do enhance the University's visibility in the region, they do provide for many students a first taste of what University education is likely to be and not unimportantly they provide one of the few opportunities in the course of the academic year for teachers and students from the several participating schools to get together, a point on which both groups have expressed satisfaction.

L'AMFIPARNASO SUCCESSFULLY PRESENTED.

Congratulations are still being received by all involved in the presentation, at the International Centre, Wollongong on September 16 and 17 of Orazio Vecchi's madrigal comedy "L'Amfiparnaso".

This was a co-production by the Circolo Italiano and the Italian Section of this University's Department of European Languages and the Sydney University Chamber Choir under the direction of Dr. Nicholas Routley. Director of the production was Mr. Maurie Scott, the newly appointed lecturer in drama of the University's Department of English, who also spoke the English rendering of the sixteenth century text. Italian introductory verses were recited by Dr. Vincent Cincotta. The production was included as part of Wollongong's "Carnevale" and admission was free. It was subsidised in part by Wollongong's Comitato di Assistenza Italiano and audiences averaged 300 per performance.

L'Amfiparnaso was so well received that a performance was given on September 23, in the Great Hall, University of Sydney. This performance was recorded by the A.B.C. and MBS-FM for subsequent broadcasting.

Reporting on "L'Amfiparnaso" to Campus News, Dr. Cincotta had this to say: "This event was of tremendous importance for it ties in with the 'Theatre set to music' studies which form part of our Italian cultural studies programme and which Joan Sutherland inaugurated earlier this year. It was a professional production but one which involved students and which brought the community of this city into close and joyful contact with the work of the University."

Italian student, Angela Chan, who played Isabella reported:-

"From a student's point of view rehearsing and performing for 'L'Amfiparnaso' was an experience that one could hardly forget. I can recall the anticipation and excitement of everybody on the Opening Night - the usual 'butterflies in the stomach' and the 'melting at the knees'. To our delight, 'L'Amfiparnaso' was a success with a capacity audience and an encouraging reception. Our producer and director, Mr. Maurie Scott was determined that we perfect every detail of the comedy which undoubtedly added to its success. Performing in 'L'Amfiparnaso' was an experience that all the students enjoyed. The fulfilment of participating in such a play is something which we found to be complementary to our constant studying from books."

One of the prime movers who got the project under way was David Vance, part-time tutor in English at this University and also a final year honours student in Music at Sydney University. David who sang in the Choir and was the link between Sydney's Music Department and Wollongong's English and European Languages Departments commented:

"L'Amfiparnaso is technically very challenging and also it was in the 16th, 17th Century Italian madrigal style so much of which we had already sung, so we felt we were a quarter of the way there with at least the style ... One of the technical problems for us was that in the original score that we were using the vocal part, having been written for the range of voices that were around in the 17th Century, didn't quite suit the voices of our choir so everything had to be transposed down one whole tone. This we did at sight and this added to the complexity of an already difficult score but the challenge, I think, was met and we were fairly happy with our performance ... It was perhaps not surprising that when we came off stage on Saturday night that the choir gave a spontaneous round of applause to our conductor, Nicholas Routley, whose thorough musicianship and concentration and control in conducting this difficult work paid off and brought us, I think, pleasing results for audiences in Wollongong."



Above: Mr. Maurie Scott, Producer of L'Amfiparnaso.

Below: Graham Adra and Enrichetta Parolin as the young lovers.



Registrar discusses future of teacher education.

The Registrar, Mr. Ron Stewart, returned in September from study in the United Kingdom and North America. Mr. Stewart had been awarded an Administrative Travelling Fellowship by the Association of Commonwealth Universities and a grant from the Kellogg Foundation to assist with study and travel expenses. He will shortly be making a full report to Council but meantime has made available to Campus News these comments on his studies and his findings overseas.

"The main theme of my studies was to examine the management-organisational structures where universities and teachers' training institutions had developed close associations in the United Kingdom, Western Europe, Canada and the United States and their possible applicability to Australian situations.

"Inevitably this had to be related to the probable decline in 'traditional' enrolments in higher education anticipated during the 1980's and 1990's associated with declining numbers of the 18 year old cohort and the impact this will have -- indeed is already having -- on teacher education.

"Throughout Western Europe and North America, there was a general decline in birthrates in the early 1960s which will be reflected in decline in the 'traditional' major source of higher education students, the 18 year olds in the 1980s. Figures 1 and 2 show graphically the problem as it is seen in Britain and California. Debate centers on how to fill in the trough. No one wants to think of the staffing and capital expenditure consequences of "following the contours" or "tunnelling through".

"If enrolments in higher education are to be maintained, where will the additional students come from? One answer is that they will come from non-traditional areas of student recruitment. For example, from older-age groups, from socio-economic classes that are relatively under represented in Universities, and from women, hitherto under-represented.

"This widening of the universities' traditional field of recruitment concerned with the upholding of the universities' privileged role in society is feared by some and welcomed by others wishing to see universities moving into mass higher education. Whatever the change of role, universities continue to be relatively more favoured than other higher education institutions probably because of their mystique or perhaps more mundanely because of the abilities of their graduates to succeed better at job-seeking than other graduates. However it seems inevitable that tensions will increase both within and without the university as the opposing philosophies struggle for dominance.

"In Britain I was formally attached to The Institute of Education at the University of London and worked closely with the Director, Dr. W. Taylor. I could have been depressed by the prospects for higher education generally spelt out by the dramatic decline in the teacher education sector in Britain had I not been so moved to admiration by the vigorous and practical manner in which the British are dealing with the situation. In the eyes of many West European and Americans they are the only ones who are "grasping the nettle", according to the Permanent Secretary of the British Department of Science.

"Some nettle!

"Briefly, in Britain the teacher education system is being run down from the 120,000 students enrolled in 1972 to about ("about" has to be used because the situation changes almost daily) 30,000 in 1981. This will involve reducing the number of teacher training institutions (excluding universities) from a total of about 165 in 1972 to about 80 in 1981; also a reduction in teacher training staff from about 12,000 in 1972 to a projected 3000. Additionally almost all of the remaining institutions will become multi-purpose colleges of one sort or another offering, in addition to teacher training, such courses as, e.g., vocational or liberal arts education, amongst which the prime offering is a 2-year Diploma of Higher Education! (Shades of the U.S.A. Junior Colleges!).

"Interestingly enough the Universities have not had to bear any reduction in their teacher training activities which will remain at roughly the same level; this means a dramatic increase in the proportion of teacher education in the Universities from about 10% of new intake in the early 1970s to just over 25% by the 1980s!

"The transition to the lower level of the operation of the teacher training system has been eased by relatively generous redundancy payments. However as the operation begins to be more widely felt there are indications of growing resistance in the individual unions (the National Association of Teachers in Further and Higher Education and the National Union of Students) and in individual colleges.

"The teacher education reorganisation (as the reduction is euphemistically described) had been demographically led, i.e. in response to the decline in school enrolments, but the decision to implement the run-down was a bi-partisan political decision based on unequivocal and insistent advice from the Department of Education and Science. There was little industrial or professional union resistance to the decision and it almost seemed the decision to run down was welcomed in the politically and economically torn Britain of 1973.

"While being interested generally in the reorganisation of teacher education, I was particularly interested in the closer associations between teacher training institutions and universities. For example this year the University of Exeter has absorbed St. Luke's College of Education (a church affiliated College); Warwick University has absorbed the Coventry College of Education (a Local Education Authority College). Currently

there are about ten take-overs of Colleges of Education by Universities either achieved or being implemented in England and Wales. There are even more integrations of teacher training institutions with Polytechnics. Almost without exception teacher training institutions have become multi-purpose in some organisational form or another.

"By contrast with the perhaps atypical British planning there seemed to be no evidence in West Germany of a planned run-down in teacher education. If there was a national (or a state) policy it was market oriented with the demand for teacher training places in the light of growing school teacher unemployment determining the issue. Fewer students are applying for teacher education places but the problem of what to do with teacher training staff remains.

"In the Canadian provinces of Alberta, British Columbia and Ontario there is no planned run-down in teacher education, although in Ontario a State Commission of Enquiry - C.O.D.E. (The Commission on Declining Enrolment) should be reporting about now and seems certain to recommend a significant run-down in teacher training in the province based on estimates of needed reductions of 20-30% in the number of teachers employed by local school boards by the 1980s if existing student/staff ratios are maintained. Amongst possible solutions for the problem of employment of teachers has been a proposal for job sharing, especially for older teachers so that at least a minimum intake of new teachers can be maintained.

"In the U.S.A. I spent a good deal of time discussing with universities and State Agencies connected with higher education the policies they intend to adopt in view of the likely decline of traditional student intake in the '80s and '90s. The optimists believe that deficiencies in enrolments will be made up from non-traditional sources; the pessimists believe this is not possible especially as the U.S.A. already enrolls in higher education a substantial proportion of non-traditional (in British terms) students and that therefore there will be closures of some existing institutions and reduction in the capacity of others. At the same time nobody is pessimistic enough to believe that the prestige universities - private and state - will have any serious problems; it is likely to be the small private colleges unable to attract students that will have to close. Both in Britain and North America there was deep concern for developing policies that would protect the research capacities of the universities e.g. by breaking the nexus - if any - between government research grants and enrolments.

"It was noteworthy that all North American universities with which I had discussions have formed strong Offices of Development. Superficially this title could be regarded as a euphemism for "Fund Raising Office" - but that would be to do its function less than justice. The Office of Development is more than that; it is through its function that greater awareness of the institution is generated throughout its communities - and this in turn generates understanding, identification, political support, and cash.

"I was very impressed (and who wouldn't be) by the Office of Development at Stanford University which raises about \$60 million per year.

"During my time away I spent a brief but interesting period near Bangkok at the Asian Institute of Technology where I was involved in discussions concerning the special arrangements established between A.I.T. and the University.

"I also spent some time in Paris at an O.E.C.D. Conference on the rationalisation of higher education facilities which looked specifically at space and building problems which will emerge as higher education contracts or develops in different ways.

"I have learnt a great deal; I was pleased to go and I'm happy to return. Our problems both at the institution and the system level are not unique and the experiences of others, if we care to share them, will help us arrive at better and more efficient solutions. While in the north the water may swirl in a different way, the wheel converts energy as always; we don't have to invent our own wheel (but we can put our own carriage on it). If we lack anything here it seems to be optimism and confidence (Where has "have to go" gone?). But I am re-assured by the fact that universities by their very nature have the creative energies to solve their problems and the act of creation assumes optimism and confidence.



Mr. Ron Stewart.

FOOTNOTE

"A final note. The greatest thing of all to hit me was L.S.D. No I haven't returned a hop-head but I'm hooked on LSD, and it's spreading. All over the bits of the world I saw, people were getting into LSD. Not the well known pharmacological substance of the same name - but Long Slow Distance running, the best trip of all and it really gets you together.

FIGURE 1

18 YEAR OLD POPULATION AND TOTAL FULL-TIME AND SANDWICH STUDENTS IN HIGHER EDUCATION, GREAT BRITAIN.

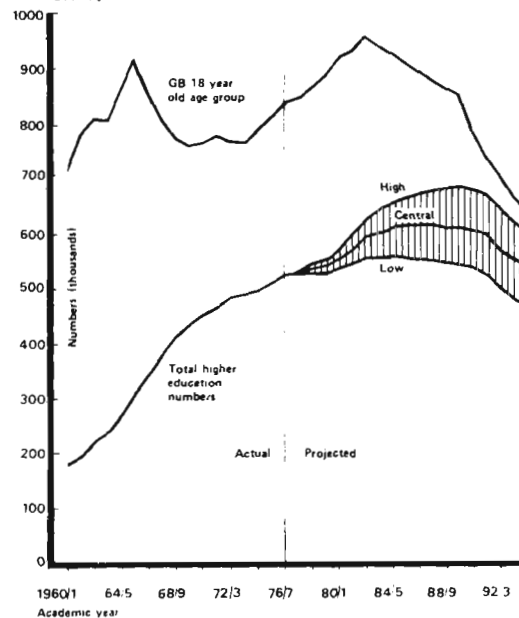
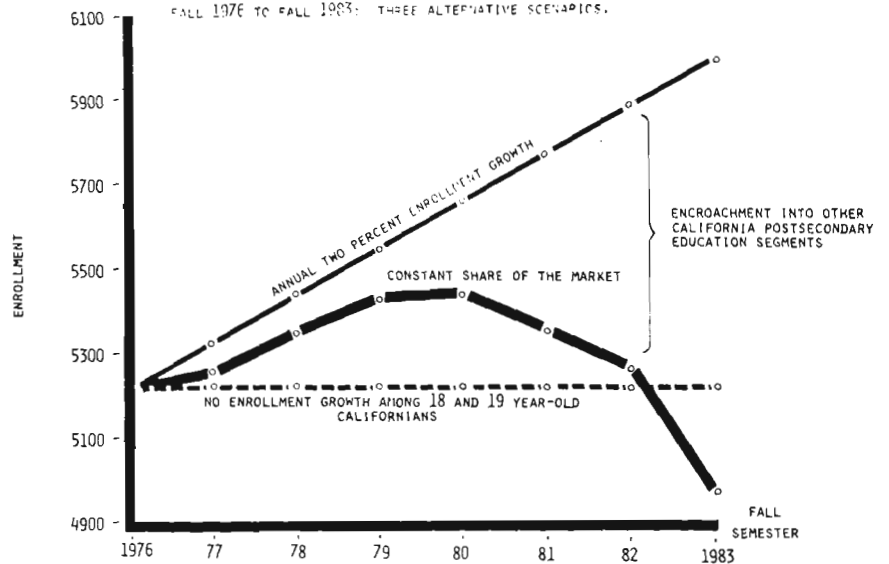


FIGURE 2

ENROLLMENT OF 18 AND 19 YEAR OLD CALIFORNIANS FALL 1976 TO FALL 1983: THREE ALTERNATIVE SCENARIOS.



BOOK REVIEW

By

Dr. Winifred Mitchell
Department of History.

Colm Kiernan, *Calwell: a personal and political biography*, Nelson, Melbourne, 1978.

Arthur Calwell 1896 - 1973, a veteran of the Labour Party in the federal sphere, is the subject of this book, the author of which is Associate Professor in the Department of History at the University of Wollongong. He wrote the book "in friendship", as a tribute not only to Calwell and his family but as well to his own parents. Calwell befriended the family as Minister for Immigration when Dr. T.J. Kiernan arrived from Ireland in 1946 as the first Irish ambassador to Australia.

It is a brave historian who takes on the task of writing the biography of a political figure, particularly one who has so recently died: the memories of many of Calwell's protagonists are still fresh; he was a member of the House of Representatives from 1940, a minister in the Labour governments of the war and postwar years, deputy leader to Dr. Evatt then leader of the Opposition, a position which he lost to Gough Whitlam. Standing between such controversial figures, he was as well involved in several major controversial issues: the Labour split in the 'fifties, the Vietnam war and the unsuccessful election campaigns of the 'sixties. The critics of Calwell and of the Labour Party can find plenty of material in Colm Kiernan's biography to set old wounds burning.

Calwell is best known, or should be, for his initiation of Australia's postwar immigration policy. Before his death the continuation of that policy had resulted in the settling of over 2,500,000 immigrants in Australia, over two-thirds from Europe. These 'new' Australians were not only an integral part of the economic development of postwar Australia but aided too in a cultural diversification not known before.

As an Irish Catholic whose political background was in Melbourne, Calwell felt the full force of the Catholic anti-Communist movement which resulted in the split in the A.L.P. and the formation of the Democratic Labour Party (D.L.P.)

in 1955. Colm Kiernan presents Calwell as a Catholic whose conscience demanded that he should remain loyal to the Labour Party rather than follow the urgings of Mannix and other Catholic friends. This did not prevent his being awarded Papal honours in 1964. (And it was the D.L.P. which ultimately perished, vindicating Calwell's anti-sectarian approach to Catholics in the Labour Party).

Throughout the biography Calwell's humanitarianism is emphasised. Motivated by his experiences in the depression when he observed the inhumanity of capitalism,

Calwell became a socialist. He was however strongly anti-Communist, believing in the Labour Party as a vehicle for social change. The Labour Party's lack of socialist doctrine is explained by the author in terms of the hegemony of the annual conference. Calwell is seen as one of the old guard of Labour men, loyal to the decisions of the conference and the common man, far more sincere than the intellectuals with legal backgrounds. His opposition to the war in Vietnam and conscription were consistent with his sincerity. His plain speaking, and by implication his many indiscreet utterances, as well as his inadequacy in the presence of more sophisticated politicians, are seen as the faults of an honest man, rather than indications of ineptitude.

What to omit is always a major problem facing the historian. There is very little about the infighting engaged in by political parties as the members jostle for positions, a distasteful exercise in which all politicians engage and one in which Calwell was as much involved as any other. The reader can of course be grateful for being spared such details. On the other hand such unpleasantnesses could contain vital clues to the understanding of the parties and the parliamentary members. Whether a politician's main purpose is to keep a well-paid job and if possible to get the best paid job of all, or whether his main concern is the benefit of the electorate are questions one has to ask about Calwell as well as all his colleagues.

These and any other criticisms of the book notwithstanding, Professor Kiernan's examination of Calwell's personal and political life makes for an intensely interesting study, both of Calwell and his biographer.

Below: Associate Professor C.P. Kiernan.



ACCOUNTING RESEARCH

- (a) The Australian Accounting Research Foundation has provided a further grant of \$3,000 to Professor J. Ryan and Messrs. T. Heazlewood and B. Andrew for a follow-up three-year comparative survey of Australian Company Financial Reporting Practices.
- (b) The Reserve Bank has provided \$7,500 for 1979 for the Australian Company Financial Reporting Project.
- (c) The Utah Foundation has made a grant of \$2,650 to enable Mr. T. Heazlewood to carry out research on the effectiveness of Accounting Standard DS 12 'Accounting for the Extractive Industries'. This is the first grant received by a member of the University's staff from the Foundation and also believed to be the first grant made by the Foundation in the accountancy area.

BEYOND THE THREE R's

Under the auspices of the University's Department of Education a two day seminar was held during September, with the title "Beyond The Three R's", and under the chairmanship of Dr. P. de Lacey.

Speakers included Dr. A. Kerr, Head, Centre for Intercultural Studies, Armidale C.A.E., who spoke on Rights of Children in a Multicultural Society; Dr. M.E. Poole, Associate Professor of Education, Macquarie University, who spoke on Recent Enquiries Into Adolescence and Problems of Leaving School and Dr. W. Lett, Reader in Education, La Trobe University, on Creativity and Giftedness.

The Seminar concluded with a panel discussion of issues and questions arising from the speeches.

Approximately 100 persons attended, including undergraduates and graduate students and other interested persons from the university and the community.

A full report on the Seminar will appear in the next issue of Campus News.

SOCIOLOGY DEPARTMENT

The Sociology Department has organised two Open Seminars for October, of general interest both to staff and students. The first, led by Ms. Dorothy Buckland, Commissioner, Ethnic Affairs Commission of N.S.W., dealt with "Migration: its impact on people." The second, led by Professor Charles Birch, Head of the School of Biology, University of Sydney and author of "Confronting The Future", is on the topic: "Science, Society and the Future."

Both Seminars will be reported on in the next issue of Campus News.

CAREERS WEEK CONDUCTED BY COUNSELLING CENTRE.

During September a Careers Week for University students was conducted by the Counselling Centre.

Individual interviews with students were conducted by representatives of the following bodies:-

The Bureau of Agricultural Economics.
The Department of Social Security.
The Department of Environment, Housing and Community Development.
Peat, Marwick, Mitchell and Co. (Accountants).

All the above conducted individual interviews with students; the Department of Environment, Housing and Community Development additionally held two General Information Sessions.

Representatives reported as follows:-
Bureau of Agricultural Economics, September 4th - Representative: Mr. Tony Tobin.

Mr. Tobin conducted interviews for 8 students. He was very impressed by the standard of our prospective Economics graduates and expressed a desire to return again in 1979. He also said that both the Department of Agricultural Economics and the Australian Bureau of Statistics would be very interested in talking to students who have completed our Computing Science major within the next 2 years.
Department of Social Security, September 5th - Representative: Mrs. Maureen Crowe.

Due to the state rail strike on this day the visit by the Department was postponed until Friday September 8th. Mrs. Crowe then conducted interviews for 5 students and indicated that the Department would be pleased to participate in future Careers Programmes.

Department of Environment, Housing and Community Development, September 6th - Representative: Mr. Cliff Lawson.

Mr. Lawson conducted interviews for 6 students and gave information sessions for 8 students (5 of these students had an individual interview). Mr. Lawson said he would be happy for the Department to continue participating in any future Careers Weeks we may have and also would be interested in talking to graduates who had done a Computing Science major.
Peat, Marwick, Mitchell & Co., September 8th, (Firm of Accountants) Representatives: Mr. Gary Hoare and Miss Inga Scarlett.

Six students were interviewed and both representatives reported they had found the day worthwhile.

Student Feedback.

A number of those students who attended the Careers Week and were interviewed by the various Departments said they found the week very beneficial and appreciated the opportunity to experience a job interview first hand.

SEXUALITY WEEK.

The University's Counselling Centre in conjunction with the Students' Representative Council and Marriage and Family Centre Staff organised a successful "Sexuality Week" at the University during August.

Approximately 40 persons attended. Speakers included Wendy McCarthy (Family Planning Association); Tina Arndt (Editor of the magazine Forum); Craig Johnson (ex. A.U.S. Officer); Dr. Sue Hepburn (Preterm Clinic); Ms. Patricia Judge (Pro-Life); Dr. Dorothy Nolan (Ex-Educational Co-ordinator for the Family Planning Association); Dr. A.M.Z. Walker (Senior Medical Officer, Health Commission Venereal Diseases Clinic) and Coral Knight (Ex National Training Officer for the Family Planning Association).

Tina Arndt, who spoke on: "Was Sexual Ignorance Bliss?" was introduced by the Acting Vice-Chancellor, Professor A.M. Clarke. The Abortion debate, in which Dr. Hepburn and Ms. Judge were the speakers, was chaired by Dr. Stuart Piggitt.

In introducing Tina Arndt Professor Clarke said: "The University has a role as a cultivator of knowledge about the natural world and its inhabitants. By definition universities should abhor the vacuum that is ignorance particularly when that vacuum has drawn in issues that are essential to any understanding of the world of living beings. But universities reflect the mores of the surrounding society and they have been accused in the past of evading and even obscuring the question of sexuality..... The week's programmes show that universities are beginning to give attention to sexuality as a study requiring a serious and co-ordinated approach. The University of Melbourne has recently considered the importance of such an approach and their Assembly report on this matter stresses the need for preparing particularly teachers, social and welfare workers, nurses and health professionals to deal with sexual issues and problems.

"Universities may not be as responsive to community needs in this area as they could be, but rather perhaps their responses are still attuned to a community that no longer exists - a community in which sexual ignorance was considered, if not to be bliss, at least to be a highly desirable state."

Ms. Arndt discussed the changes that have occurred in recent years with regard to sexual attitudes and sexual behaviour, together with the reasons for these changes. She concluded by saying: "I don't think that sexual ignorance is ever bliss but what I would be questioning is, now we have a certain amount of knowledge and I wonder whether in many ways we are better or worse off."

This introduced a lively period of questioning and general discussion.

WORK EXPERIENCE PROJECT.

For the week commencing 25 September 1978 two students from Holy Cross College worked in the Reader Services Department of the Library. Both girls worked a full week under normal conditions, were not paid, and separate insurance cover was arranged for them. Appropriate tasks were arranged for the girls by the Reference Librarian, Miss Rosemarie Dowe.

The programme is a welcome development in the Region. Far too often potential employees are unable to secure any real awareness of the type of working situation to which they aspire. It is anticipated that this programme will be the first of many and the Library was required to report on the performance of each girl after the week was up. Both girls worked extremely well, but we are not certain whether it is emancipation from school or the working situation that has achieved what seems to be a happy first experiment.

Student Selected For World Judo Championships.

The following report comes from Karin Sheedy, President of the University Judo Club.

During August recess the Wollongong University Team competed at the University of N.S.W. in 1978 Judo Intervarsity.

This is the first year Wollongong has ever entered a team, unfortunately this year we could only manage a three-man team out of a possible seven.

The team was: John Eklund (Maths), Monier Bahsoun (Arts) - Captain, Jim Sheedy (Arts).

Overall in the teams events Wollongong finished seventh out of nine entries. Unfortunately for Wollongong our team-captain Monier, was injured in his last fight of the day in the teams events and could not compete in the individual championships two days later. By the form he showed on the Tuesday - some of the best judo techniques displayed at Intervarsity this year and not losing a match all day - he would easily have taken out the U. 78 kg. individual championships on the Thursday if he had not been injured.

John Eklund gained fourth place in the U. 65 kg. division and his style of play improved greatly throughout the championships.

Jim Sheedy won the U. 71 kg. division. As a result of his performance and his contest record over the past three years he was selected for the Australian National Universities Team, as well as being nominated to contest in Brazil in the World Student Judo championships during 1st-5th November 1978. He is now training hard finishing his Arts 1 coursework and trying to raise his air-fares for Brazil by November.

DONALD HORNE SPEAKS AT UNION DINNER.



Above: Writer Donald Horne, an entertaining and provocative speaker at this year's Union Dinner, received close attention from an audience of some 170 happy diners including Assistant Registrar Challice Moldrich, pictured here with Mrs. Moldrich.

OPEN QUESTIONS FORUMS.

The third Open Questions Forum was held on August 24th under cold figtrees on a cold day. Unlike previous forums the speakers were in agreement so that there was a subject being aired rather than two speakers polarizing on an issue and the audience taking sides.

"Contraception, who is responsible?" was the topic and the speakers and audience agreed that it was a shared responsibility except for cases where the couple could not be considered responsible. Groups in the community, government or Church groups, who took responsibility were considered to be interfering and disrespectful of the rights of individuals.

Questions ranged around compulsory sterilization imposed by governments, the celibate's bias in viewing sexuality, dangers and ignorance about side effects of contraception and the law and modern scientific methods of creating life.

Marriage and Family Guidance Counsellor, Mrs. M. Fuller, though speaking as a private individual, brought to the forum the richness of her experience as a Marriage Guidance Counsellor, mother, and wife of a medical practitioner. University Counsellor, Mr. M. Breen, spoke from the observations of a counsellor of tertiary students and his study of theology, philosophy and church history.

Wollongong Lord Mayor Alderman Frank Arkell and senior physics lecturer Dr. Ken Ausburn, who is also a former secretary of the South Coast Conservation Society, were the speakers at a lunch time forum on the question of Who Are The Polluters?

Alderman Arkell spoke strongly against those who pollute the city with litter, and stated that the Wollongong City Council spends about \$1 million a year cleaning up litter; a figure which could well soar to \$2 million.

Dr. Auburn defined "Polluters" as those whose decisions result in the extensive dispersal of materials which are injurious to significant biological systems.

He said that the global dispersal of radioactive nuclides from nuclear explosions in the earth's atmosphere is one example of the extreme in "extensive dispersal". All people on earth, not to mention other organisms, have measurable quantities of radioactive nuclides incorporated in them from atmospheric testing of nuclear weapons in past years. The concentrations of some nuclides through man's food chains and biochemical processes was an unpleasant surprise for those who originally believed that the dispersal of radioactive material throughout the earth's atmosphere would reduce its concentration to negligible levels.

Global dispersal of carbon dioxide and dust are also a potential threat to the biosphere. Lower down the scale we have dispersal of sewage in oceans, lakes and rivers; of heavy metals from industries into the atmosphere and of lead from petrol.

All materials which are extensively dispersed into the biosphere should be assumed potentially injurious to biological systems unless proved otherwise. Thus the dispersal of any waste product should be carried out with caution and continually and carefully monitored. Mere suspicion that a material is injurious should be sufficient reason to stop its dispersal.

As for the phrase "significant biological systems", Dr. Ausburn said that the significance of a biological system is a function of its size and quality. Obviously global scale pollution (CO₂ for example) threatens a "significant" biological system. At the lower end it would be reasonable to accept the local examples of Lake Illawarra and the eco system of the Illawarra Escarpment as biological systems of significance even if measured on a world scale. Dispersal of pollutants over smaller systems, while not desirable, may be tolerable.

Dr. Ausburn concluded by stating that until it is possible for members of the public to take legal action against companies and authorities responsible for pollution, there seems little chance of a significant change in the attitude of society towards the wonderful natural environment we inherited from many millions of years of evolution.

CAMPUS NEWS

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