

MONASH UNIVERSITY



Report
of the
Council

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Registered in Australia for transmission by post as a book

*Printed by Wilke and Company Limited
37-49 Browns Road, Clayton, Victoria*

REPORT OF THE COUNCIL FOR 1971

In accordance with section 41 of the *Monash University Act 1958*, I submit the annual Report of the Council of the University for 1971.

1. THE COUNCIL

The Council held eleven meetings during the year.

At graduation ceremonies in the course of the year, the following honorary degrees were conferred:

Doctor of Laws:	Robert Rutherford Blackwood
Doctor of Letters:	Alan Rowland Chisholm
Doctor of Laws:	Rohan Delacombe
Doctor of Letters:	Alfred Ernest Floyd
Doctor of Science:	Charles Garrett Phillips

During the year, there were considerable changes in the membership of Council since a large number of four-year terms of office came to an end. Three members appointed by the Governor-in-Council, the Honourable R. W. Garrett, Mr G. H. Thomas and Mr J. W. Wood, were respectively replaced by the the Honourable G. J. Nicol on the recommendation of Parliament, by Mr M. B. Brereton on the recommendation of the metropolitan technical schools and by Mr O. Rozenbes on the nomination of the Melbourne Trades Hall Council. Dr N. J. Gray was elected by the faculty of Medicine in place of Dr T. E. Lowe; Professor J. D. Legge and Professor K. C. Westfold were elected by the professors in the places of Professor D. Cochrane and Professor R. Street; and Dr P. le P. Darvall was elected by the teaching staff other than professors to take the place of Dr I. D. Hiscock. A change in the University's legislation increased the number of elected students from one to two and, accordingly, Mr J. E. Varley (undergraduate) and Mr G. D. Hubbert (graduate) were elected by the students when Mr K. G. Murphy's period of office ended. In addition to all these changes due to appointment and election, two co-opted members, Miss A. Hoy and Sir James Forrest, resigned: Council co-opted Dr P. F. Hutson and Mrs K. B. Myer to take their places.

Of the ten members named above who relinquished office, no less than five—Professor D. Cochrane, Sir James Forrest, Miss A. Hoy,

Dr T. E. Lowe and Mr J. W. Wood—had each served for ten consecutive years having been foundation members of the Council in July 1961. Moreover, Miss A. Hoy had also previously served for more than three years as a foundation member of the Interim Council. Such notable and valued service should not go unrecorded.

Mr R. C. Fordham, Dr F. G. Lennox, the Honourable S. R. McDonald and Mr E. J. Tippett, all of whose terms of office expired during the year, were re-appointed or re-elected in their same capacities for further four-year periods.

In March Sir Douglas Menzies and Dr F. G. Lennox took office as Chancellor and Deputy Chancellor respectively for a further three years.

2. DEVELOPMENT OF SITE AND BUILDINGS

The following buildings were completed and taken into use during 1971: Robert Blackwood Hall; the medicine-biochemistry building, consisting mainly of teaching laboratories on two floors; Roberts Hall, the first of the new halls of residence. Substantial alterations to the medical school were also completed.

The extension to the Hargrave Library and the second of the new halls of residence, Richardson Hall, were both commenced, and completion is expected in July 1972.

Work started on the environmental laboratory for the department of Zoology and on the audio-visual services extension, completion of both being anticipated early in 1972.

Plans were completed to tender stage for engineering building 6, a three-storey building containing accommodation for the departments of Electrical, Materials and Chemical Engineering and including a high-voltage laboratory.

Planning of the extensions for the departments of Physics and Chemistry approached tender stage.

Sketch plans were completed for stage 1 of the extensions to the Robert Menzies School of Humanities and were commenced for stage 2 after approval of the latter as a "green light" project for the 1973-75 triennium.

Sketch plans were commenced for the extension to the Zoology and Biology buildings, with accommodation for the departments of Zoology, Botany and Psychology, and for the extension to the mathematics building in which a new department of Earth Sciences will be located. In addition, sketch plans were completed for stage 1 of the sports field house.

Site works continued. Major works completed were the administration and biology car parks, the surrounds to Robert Blackwood Hall and the bus terminal,

3. ADMINISTRATIVE MATTERS

Legislation

In 1971 Council made eight statutes including a new statute providing for the appointment of Pro-Vice-Chancellors and an amending statute to provide for the election of a second student member of Council. During the year Council also made forty new and amending regulations pursuant to the University's statutes.

University Publishing

The official publications of the University appeared at the appropriate times during the year. The Professorial Board decided that as from 1972 the Calendar should be published in one volume only, bound in a soft cover. After appearing since 1964, the Gazette has been discontinued, its function having been assumed to some extent by *Monash*, the University's research publication.

The Publications Committee, which is responsible for the University's academic publishing, met four times in 1971. It has continued to subsidize publications by Monash academics and to help them find publishers. Two books are currently being published by Hawthorn Press with assistance from the University and another is being published in London by Methuen with Monash support. Discussions are proceeding with publishers regarding a number of other manuscripts. During the year the Publications Section designed and produced a fifty-page monograph on behalf of the Committee and has another similar work in hand.

Monash Associations Liaison Committee

The Monash Associations Liaison Committee is a committee of delegates from individual university associations interested in and working for the University.

Its objectives are:

(a) to provide an opportunity for parents and others interested in Monash University to associate themselves more closely with the University,

(b) to encourage contact between members of the University and members of the community for their mutual benefit,

(c) to assist with specific projects associated with the University and help raise funds for specific University purposes.

During 1971 several successful functions were held, including a parent orientation day, several public lectures, a dinner for parents of first year students, and an art exhibition called "Connoisseur's Collection" which raised over \$2,000 for the Robert Blackwood Hall.

Safety

Council revised the terms of reference and constitution of the Safety

Committee to bring pedestrian and vehicular traffic safety within its ambit, an area which was until that time the responsibility of the then Parking and Traffic Committee.

The University maintained its association with the National Safety Council, which continued its own campus safety surveys, and with the Dandenong and District Safety Group.

The collection of statistics was improved by the introduction of new methods of accident reporting, and the Radiation Sub-Committee continued to provide advice to users of radioactive materials.

Practical training sessions embracing such topics as resuscitation, rescue breathing, fire fighting and kinetic lifting were held within departments.

4. STAFF APPOINTMENTS

The Report of Council for the year 1970 referred to the University's inability, because of shortage of funds, to provide new positions for 1971. This, coupled with a rise in resignations from a low level in 1970 to a figure more in line with the trend of the previous years, made 1971 a year in which recruitment and resignations were in balance, the total of full-time academic staff in the following table being one below the figure of December 1970.

FULL-TIME ACADEMIC STAFF (as at 31 December)

	Arts	Economics and Politics	Education*	Engineering	Law	Medicine	Science	Total
Deans	1	1	1	1	1	1	1	7
Professors	19 (4**)	12 (3**)	4 (1**)	7 (1**)	3	17 (1**)	17 (4**)	79 (14)
Readers	5	2	—	1	—	6	11	25
Associate professors	5	1	—	5	1	9	2	23
Senior lecturers	50 (2)	22 (2)	19 (1)	28 (2)	13	37 (4)	46 (1)	215 (12)
Lecturers	58 (3)	31 (4)	11 (1)	22 (4)	13 (4)	20	43 (6)	198 (22)
Senior tutors	12	1	1	—	1	1	—	16
Senior teaching fellows	26 (3)	14 (3)	7 (1)	4 (2)	3	23 (18)	28 (8)	105 (35)
Teaching fellows	21 (11)	20 (10)	—	1 (1)	3 (3)	2 (3)	5 (4)	52 (32)
Total	197 (23)	104 (22)	43 (4)	69 (10)	38 (7)	116 (26)	153 (23)	720 (115)

* Includes Higher Education Research Unit.

** Includes visiting professors.

(The numbers in brackets indicate those who took up their first appointment at Monash in 1971.)

Full-time academic staff who left Monash University during 1971 to take up other appointments, or at the end of visiting appointments were:

Resignations

Deans	1
Professors	1
Visiting Professors	10
Readers	1
Associate Professors	1
Senior Lecturers	16
Lecturers	15
Senior Tutors	1
Senior Teaching Fellows	50
Teaching Fellows	20

116

Those who resigned included Professor R. Selby Smith, foundation professor of Education and first dean of the faculty of education, who was appointed principal of the Tasmanian College of Advanced Education, and Professor B. L. C. Johnson, foundation professor of Geography, who was appointed to a chair of Geography in the School of General Studies, A.N.U.

One of the rotating University visiting professorships was filled during 1971 and nine other scholars accorded the title held appointment during the year.

Of the full-time academic staff who took up appointment during the year, 64 (of whom 54 had taken their first degree in Australia and 10 overseas) were recruited from Australia, and 51 (of whom 15 had taken their first degree in Australia and 36 overseas) were recruited from overseas.

The following professors took up their appointments in 1971:

Professor D. E. Allan, M.A. (Cantab.), as dean of the faculty of Law (Sir Owen Dixon Chair of Law)

Professor S. S. Dunn, B.A., Dip.Ed. (Adel.), B.Ed. (Melb.), as dean of the faculty of Education

Professor D. Bradley, B.A. (Melb.), M.A. (Cantab.) (English)

Professor R. W. Cumming, B.E. (Aero.) (Syd.), A.M. (Psychol.) (Mich.), M.E. (Melb.) (Psychology)

Professor I. D. Gross, B.A., B.E.E. (N.Y.), M.S.E.E. (S.Calif.), Ph.D. (Case Western) (Marketing)

Professor M. I. Logan, B.A., Dip.Ed., Ph.D. (Syd.) (Geography)

Professor R. H. Snape, B.Com. (Melb.), Ph.D. (Lond.) (Economics)

Professor F. Van Laere, Lic.Phil.L. (Brussels) (French)

⁽¹⁾The following professors were appointed but will not take up duty until 1972:

Professor B. E. Hobbs, B.Sc., Ph.D. (Syd.) (Geology)
 Professor R. G. Keightley, B.A., Ph.D. (Cantab.) (Spanish)
 Professor W. A. Rachinger, M.Sc., Ph.D. (Melb.) (Experimental
 Physics)
 Professor R. J. W. Selleck, B.A., B.Ed., Ph.D. (Melb.) (Education)
 Professor R. H. T. Smith, B.A. (N.E.), M.A. (North Western), Ph.D.
 (A.N.U.) (Geography)
 Professor G. C. Weeramantry, B.A., LL.D. (Lond.) (Sir Hayden Starke
 Chair of Law)

Mr R. F. Routley left the University in 1971 at the end of his three-year Monash University senior research fellowship in Philosophy; eight research fellowships and thirty-eight more junior full-time research posts were filled.

Since the inception of the University there has been growth in both the numbers and diversification of the administrative and support staff in faculty offices, teaching departments, computer centre and the central administration, and the following figures are given as at the end of 1971:

	<i>Admin. Asst. and above</i>	<i>Systems Anal. and Comp. Prog.</i>	<i>Lab. Man. and Managerial Staff</i>	<i>Prof. Qual. and Spec. Staff</i>	<i>Total</i>
Faculties and Teaching Depts.	10	—	20	12	42
Central Administration	75	8	—	6	89
Computer Centre	1	8	—	—	9
Ancillary Areas (includes Halls of Residence and Bookshop)	18	—	7	4	29
	<u>104</u>	<u>16</u>	<u>27</u>	<u>22</u>	<u>169</u>

This represents a small increase on the figures at the end of 1970.

In the University library, graduate and other staff with formal Library qualifications total fifty-eight compared with sixty-one at the end of 1970.

Total full-time staff of the University at 31 December 1971 was 2,376 compared with 2,317 in 1970.

The University records with regret the deaths in 1971 of Mr E. H. Clark, the University librarian, Miss M. E. Davies of the department of French, Mr R. L. Wylie, buildings superintendent, Mr D. Howarth of the library, Miss L. A. Payne of catering services and Mrs I. W. Eastick and Mr R. H. Gordon of central services.

5. ACADEMIC DEVELOPMENTS

The following degrees and diplomas were conferred by the University at graduation ceremonies in 1971, the final column indicating the total number of degrees and diplomas awarded since the foundation of the University.

	<i>Male</i>	<i>Female</i>	<i>Total 1971</i>	<i>Total 1961-71</i>
Bachelor of Arts	190	349	539	2343
Bachelor of Arts with Honours	51	44	95	319
Master of Arts	5	7	12	51
Bachelor of Economics	276	47	323	1104
Bachelor of Economics with Honours	30	4	34	135
Master of Economics	8	3	11	29
Bachelor of Education	27	12	39	103
Bachelor of Engineering	56	—	56	188
Bachelor of Engineering with Honours	72	—	72	242
Master of Engineering Science	8	—	8	31
Bachelor of Jurisprudence	62	14	76	327
Bachelor of Laws	54	6	60	190
Bachelor of Laws with Honours	9	—	9	19
Master of Laws	—	1	1	4
Bachelor of Medical Science	1	—	1	10
Bachelor of Medical Science with Honours	13	3	16	42
M.B., B.S.	91	13	104	460
M.B., B.S. (Honours)	30	5	35	105
Doctor of Medicine	1	—	1	6
Bachelor of Science	113	48	161	580
Bachelor of Science with Honours	84	34	118	416
Master of Science	8	6	14	87
Doctor of Science	—	—	—	2
Doctor of Philosophy	70	6	76	273
Master of Administration	1	—	1	1
TOTAL DEGREES	<u>1260</u>	<u>602</u>	<u>1862</u>	<u>7067</u>
Diploma in Education	192	194	386	1561

1970 ANNUAL EXAMINATION STATISTICS

After a steady increase in pass rates from 1964 to 1968, there was a fall in 1969 in the rates for the first year full-time students in the faculties of Arts, Economics and Politics, Law and Science.

In 1970 the pass rates for first year students rose, and in 1971 the pass rates rose further to as high as (or, in two faculties, higher than) the 1968 pass rates.

The pass rates in the faculties of Education, Medicine and Engineering have not shown a similar movement. A general rise is evident in pass rates for these faculties over the whole period covered by the statistics,

PASS RATES (per cent)
(For first year full-time students)

	1964	1965	1966	1967	1968	1969	1970	1971
Group (a)								
Arts	57	70	67	74	80	77	78	80
Economics and Politics	61	70	77	85	83	76	76	88
Law	60	71	76	72	80	72	80	82
Science	60	78	88	89	90	86	89	90
Group (b)								
Diploma in Education	84	88	90	90	89	92	92	92
Engineering	55	70	70	84	74	75	84	88
Medicine	64	84	89	91	97	96	99	96

Note: For the purposes of this table, students are regarded as having passed in—

Group (a) if they have passed more than half the subject or units taken except that those taking three subjects are regarded as having passed the year only if they have passed all three subjects; and

Group (b) if they passed all subjects or failed in one or two subjects but were granted passes in the year as a whole and continued into the next year of the course.

VICE-CHANCELLOR'S REPORT

11 March 1971 was the tenth anniversary of the opening of Monash University by Sir Henry Bolte, Premier of Victoria. The occasion passed without special celebration but, as Monash enters its second decade of teaching and research, there has been a good deal of heart-searching about what has been accomplished, what opportunities seized and what missed and what should be the direction of future development.

Observers of our work, both within and without the University, pick out different aspects for praise or blame according to their own viewpoints. The distinguished academic work that characterizes many departments is often commented on especially by overseas visitors who are frequently much more aware of the academic strength of this University than many Australians.

One Monash lecturer wrote of an ageing process which has produced alienation and polarization in place of the enthusiasm of the pioneering stage. He suspected that our department-faculty system, operating in what is now a very large university, was at fault and deplored the absence of an Oxbridge-type college system.

The press can be relied on, with pathetic single-mindedness, to re-

port any student misdemeanour as fully as if it were an international incident, and to ignore other much more significant—but in their eyes duller—news.

One aspect of our 1971 state which has elicited much favourable comment is the appearance of the campus. Because a lull in our building programme enabled the growing maturity of the gardens to be fully appreciated, perhaps for the first time, the success of the all-native planting policy which was adopted from the outset has attracted much favourable comment.

The fact is that, after a decade, Monash is a large, vigorous, complex and dynamic place in which achievement is far from uniform. The deans, in their individual reports which follow, recount in some detail the salient features of the activities of their faculties; my task is to try to sum up the progress of the University as a whole or, at least, to pick out some of the events which can be regarded as particularly characteristic of the year under review. I begin with the problem of communications.

Enough has been said about the size and complexity of this place to make it obvious that it is very difficult to ensure that everyone can, if he wishes, be fully informed about what is actually happening or intended. This difficulty was recognized from the outset and many attempts have been made to improve the flow of information. The most important step was taken very early on when Council decided that its agenda and minutes could be widely circulated but, as these documents have become more complicated and voluminous, this well-intentioned attempt at anti-secrecy has become increasingly ineffective.

Some years ago the *Monash Reporter* was started, mainly as a vehicle to carry departmental news around the University. It was soon found that news cannot be relied on to arrive, unsolicited, on the desk of a static editor and this year *Monash Reporter* is edited by a professional journalist whose job is to solicit news stories, select what he regards as of wide interest, and present it in a lively format.

It is a feature of the present university scene that campuses are inundated by broadsheets distributed by political or other groups whose object is to propagate a particular point of view. These broadsheets are characteristically rather crudely typed on a single sheet of foolscap; they are hastily written, ill-spelt, inaccurate, vituperative, insulting—and widely read. At Monash some attempt at control is made by requiring each of these sheets to carry an authorization but this is an inadequate defence against the deliberate misrepresentation in which some propagandists indulge.

At a difficult stage in 1970, when feelings were running high about the expulsion of certain students, it was decided that an official broadsheet should be started to give publicity, as the first issue announced, to "facts that can be verified and opinions that are soundly based". *Sound*, as the broadsheet is called, has appeared on some fifty-odd

occasions in 1971 and, although it may not be as widely read as its more tendentious rivals, there is some evidence that its reliability is acknowledged.

Mention should also be made of *Monash: What's New in Education, Research, and Community Service*, a four-page, illustrated leaflet which, appearing five times a year, is widely distributed outside the University in an attempt to improve public knowledge of important work.

Universities have long relied on the spoken word as the prime means of communication and, in this tradition, the Vice-Chancellor and a few colleagues have held a forum each Tuesday when any questions fired by a student audience would be answered. In kindred fashion two "teach-ins"—on "The university: should it be politically neutral", and "Authority and responsibility within the university"—were held in 1971 but it has to be admitted that all these attempts at oral dialogue were disappointing.

A continuing opportunity for communicating with the surrounding community, through concerts, exhibitions, public lectures and so on, became available in June when Robert Blackwood Hall was opened by the first Chancellor, after whom it is named. This splendid hall, which seats 1,350, has already been used for degree ceremonies; a "Collector's Exhibition" of fine paintings; and several concerts of which perhaps the most exciting was one given by the Melbourne Symphony Orchestra. The acoustics of the hall are exceptionally good, both for speech and for music, because the reverberation time can be varied by means of a system of adjustable curtains.

The hall was partly financed by government grants and partly by private gifts: among the latter mention should specially be made of the elegant ceremonial chairs for the platform, which came from the Monash Parents' Group. A residential scholarship, display cabinets in the Union and several generous grants to the library have also been provided by this group over the years.

A great deal of thought and time has been expended during the year on various aspects of the government of the University. In 1970 the first of two Pro-Vice-Chancellors was appointed and Professor Swan has been in office during 1971. Attempts to appoint the second, which have not so far been successful, have led to some further consideration of the Vice-Chancellor's duties and to the way in which his office functions.

It is widely accepted that the sheer volume of business to be handled by the Vice-Chancellor and his senior colleagues results in serious over-loading and, in order to improve this state of affairs, the positions of Deputy Academic Registrar and Deputy Comptroller, as well as two Pro-Vice-Chancellors, were created.

The constitution of the Council has also been under scrutiny and proposals for some changes in the membership have now reached the Minister in the form of draft amendments to the Act. Briefly, the effect of the proposed changes will be to increase slightly the academic mem-

bership of the Council, at the expense of the external membership; student representation in particular, is increased.

Partly as a result of the deliberations of the Commission on University Affairs, which reported in 1969, student and non-professional representation on virtually all university committees has been either established or increased but, so far, to little effect. In many cases candidates have not come forward for election and, in others, elected members have been desultory in their attendance. The fact is that it is in the nature of university business that many committee meetings should be routine in character and that progress, in view of the widespread consultation that is often involved, is slow. The rate of change is therefore disappointing to those who perhaps joined a university committee in the hope of achieving instant reforms.

One feature of the Monash constitutional arrangements which, although very successful here, has not been adopted widely in Australia, is the practice of appointing deans on a full-time basis. This arrangement was continued when Professors Allan and Dunn were appointed deans of Law and Education respectively.

The disputation with students which characterized 1970 continued in first term 1971 but came to an abrupt end when a compromise was reached over three students whose expulsion from the University was suspended after they had signed certain undertakings. The work which had gone into the development of a new discipline statute was, however, brought to nothing when a student meeting resolved to reject what had been hoped to be an agreed final draft. The issue of student discipline, which several years' experience had shown to be an explosive one, still remains in an unsatisfactory state.

Among the physical developments which came to completion in 1971 were Roberts Hall, our fourth hall of residence, which provides accommodation for some 170 men and women. Attempts to improve the road system included a new bus station, which segregates bus from other road traffic, and Ring Road East which completes the peripheral road. While this is in some ways a great convenience it has led to an increase in non-University traffic which is to be countered by the installation of gates. The speed at which cars are driven on our roads continues to give rise to concern but no satisfactory solution has been found.

For various reasons not much building has been in progress during the year although several projects to be built during 1972, the last year of the present triennium, were in the planning stage. Prospects for the 1973-75 triennium were discussed with members of the Australian Universities' Commission when they visited the University in June. It is evident that the Commission regards the building programme as nearly complete.

During the year the Fourth University Committee has been sitting and it is perhaps appropriate at this point to mention the co-operation which has developed in certain areas between the three existing univer-

sities and the Victoria Institute of Colleges. Three important committees have been established and are now working well: the Victorian Universities and Schools Examinations Board conducts the examinations which are intended to regulate entry to the three universities and which also serve as school leaving examinations for the many who do not proceed to a university; the Victorian Universities Admissions Committee which operates the admission system for the universities and, this year, for some of the colleges of advanced education; and the Victorian Universities Committee which meets three or four times a year for a general exchange of views on matters of mutual interest.

Finally, I wish to comment briefly on the utilization of University premises. For some time there has been criticism of the under-use of University facilities during the vacations and especially in the summer. While this criticism fails to acknowledge that it is really only undergraduate lecture theatres and laboratories that are in question, the rest of the buildings and offices continuing in full use throughout the year, there is sufficient force in the argument to make a full review of the teaching calendar desirable. It was thought that a three-semester system of year-round teaching showed sufficient promise to be worth a full examination and this was done. While year-round teaching as practised, for instance, at Simon Fraser University near Vancouver, has substantial disadvantages which probably outweigh the advantages, a two-semester system, in place of the present three-term system, has a good deal to be said for it; it is to be instituted in 1972.

However the fact does remain that, although they should probably not be used for normal undergraduate courses, many rooms are vacant during the summer. The solution seems to be to run summer schools, of great or not so great academic rigour, and this is increasingly being done. For the last few years, in addition to refresher courses for teachers and other such manifestations of continuing education, a summer school in the wide range of leisure-time activities has been based on the Union. The demand for places in the school far outstrips capacity and suggests that, in a time when the thirty-five-hour working week will probably soon be general, there is a large potential clientele to which the University has much to offer. Certainly we now have splendid facilities in which to carry out this work and the Robert Blackwood Hall and the Alexander Theatre should soon become the focus for such a programme. All that remains is to build up the year-round organization necessary to develop Monash University into the recognized intellectual and cultural centre of this part of Melbourne.

Faculty of Arts—Dean: Professor G. R. Manton, M.A. (Cantab.)

Students

The total of undergraduates, after increasing by a gradually diminishing percentage in previous years, fell slightly from 2,962 in 1970 to

2,951 in 1971. With the first year quota remaining at 1,100, it is unlikely that the total will increase unless a greater proportion become candidates for honours and complete a four-year degree. However, in 1971 a slightly higher proportion were full-time students and there was consequently a further rise in the number of undergraduate EFTS.

The number qualifying to graduate at pass level at the end of 1971 rose from 500 in 1970 to about 580, and at honours level from 90 to 112. There was an increase in graduate enrolments from 268 to 326. During the year, 8 qualified for the degree of M.A. and 2 for the degree of Ph.D.

Staff

The freezing of staff numbers at the 1970 level in spite of an increase in the total of equivalent full-time students meant that most departments were under some pressure, and it was only possible to provide for exceptional growth in some departments by leaving vacancies unfilled in others. It has been especially difficult to meet the demand for places in Sociology at all levels. In spite of the imposition of a first year quota, which is not likely to be lifted for two or three years, and some success in attracting well qualified recruits to the staff, the teaching load has been very heavy.

Three professors were appointed during the year. Associate Professor D. Bradley was promoted to the second chair of English, formerly held by the late Professor A. King. Professor R. H. T. Smith of Queen's University, Kingston, Ontario, was appointed to the chair of Geography vacated by Professor B. L. C. Johnson who resigned to go to the Australian National University in September. The chair of Spanish, established in 1969, was filled by the appointment of Dr R. G. Keightley of the University of Nottingham. With the arrival of the two most recent appointees, the faculty will for the first time in its history have all its chairs filled.

During the year, Mr G. G. Betts, senior lecturer in Classical Studies, was promoted to associate professor.

Dr D. B. Heron, who had held the office of sub-dean since its creation at the end of 1969, resigned from the end of February to take up his appointment as Deputy Academic Registrar. He was succeeded for a period of four months by Dr H. K. Platt, lecturer in German, and then by Dr J. S. Duncan, senior lecturer in Geography. In August Mr G. M. W. Joyce succeeded Mr J. H. Peacock as faculty secretary. Professor H. D. Rankin was elected in June for a further year as associate dean.

Visitors

Four visiting scholars were able to stay for a month or more. Professor George McT. Kahin, former director of the Southeast Asia

Program at Cornell University and director of the Cornell Modern Indonesian Project, was a visitor to the department of History and the Centre of Southeast Asian Studies. Professor E. Brown, of University College, London, spent two terms as Visiting Commonwealth Professor in the Geography department. Professor J. Pouwer, of the Victoria University of Wellington, New Zealand, lectured in Anthropology, and Professor Fumiko Koide, of the International Christian University in Tokyo, spent a month in the department of Japanese. She has now accepted the position of director of the Monash Centre in Tokyo.

Among short-term visitors in various departments were the following—

Classical Studies: Mr G. Cawkwell, fellow of University College, Oxford, and Professor E. T. Salmon of the department of Ancient History at McMaster University, Hamilton, Ontario.

English: Professor J. Hardy of New England, Professor J. McQueen (Edinburgh) and Dr R. D. Mitchell, Fellow of St. Edmund Hall, Oxford.

French: The novelist, M. Michael Butor, Professor R. N. Coe (Melbourne) and Emeritus Professor A. R. Chisholm (Melbourne) who was awarded an honorary D. Litt. by Monash University in May. The ceremony attracted numerous visitors from all Australian universities and from overseas.

German: Professors W. P. Lehmann (Austin, Texas), W. Hinck (Cologne), D. H. Green (Cambridge) and K. D. Erdmann (Kiel), and the writer and critic Horst Bienek.

Linguistics: Professor I. Dyen (Yale).

Music: Professor William P. Malm (University of Michigan), Professor Man-Young Hahn (College of Music, Seoul, South Korea), A. L. Lloyd (British folklorist), Dr Pandji (the Conservatorium of Music, Bali) and Mr F. Harjadi (Academy of Music, Djakarta Cultural Centre). All of these are in the field of ethnomusicology. In the field of contemporary music the department was also visited by Professor Wilfrid Mellers (University of York) and Dr Andres Jurres (President, International Society of Contemporary Music).

Spanish: Professor K. Garrad (Flinders University).

The Faculty Board

In June a recommendation first put forward by the faculty board in 1969, that senior teaching fellows and teaching fellows should be members of the faculty and eligible for election to the faculty board, was implemented by an amendment to the Faculties Statute.

Both on the faculty board and in individual departments there has been very full discussion of the implications of the forthcoming change from a three-term to a semester timetable. The change will not necessi-

tate any immediate change in the structure of the degree course, which as far as the Arts faculty is concerned will continue to be based mainly on subjects taught throughout the year and assessed as a whole at the end of the year. However, even under a three-term timetable some departments have made a practice of subdividing subjects into units, the teaching of which has been contained within one-half of the year, and holding some mid-year tests or examinations at about the end of June. The new mid-year break of three weeks will make it easier to hold mid-year tests and examinations and, where subjects lend themselves to subdivision, certain departments have decided to designate certain units as semester units, taught entirely within one semester. However, the examinations for a first semester unit may be held either at the end of the first semester or at the end of the teaching year and, in any case, the final assessment and grading of a student's performance will normally be made in the full subject at the end of the year.

The faculty board has also given attention to the problem of student work loads. A small standing committee, including a student representative, has been active, and departments are being encouraged to issue as much information as possible at the beginning of the year on assignments to be completed during the year, and to explore together the programme of dates for the submission of written work.

General Departmental News

Among new courses introduced in 1971 were honours courses in Ancient History and a unit of Sanskrit offered as one of the language options at third year level in Russian. This unit is available to students in other departments.

The departments of French and German again arranged special courses for higher school certificate pupils. In common with other departments such as Classical Studies, English, Geography and History, which are also concerned with subjects taught in schools, they have been actively engaged in liaison work with schools, either through the standing committees of the VUSEB or by providing special seminars and refresher courses for teachers.

The department of Indonesian and Malay, in collaboration with the Forelanders Trust, organized its sixth successive crash course in Indonesian. Language Services, under the direction of Dr E. W. Bauer, again provided, at the request of the Department of Immigration, an eight-weeks' intensive course in English for sixty immigrants.

The French department has benefited greatly from the generous scholarship and teaching assistantship schemes operated by the French government. The department of Japanese is again grateful to various commercial organizations for donations which have assisted honours students in their fourth year in travelling to Tokyo to spend six months at the Monash Japanese Centre.

Graduate Studies and Research

It is difficult to single out specific projects from the wide variety of work in progress. The activities of the Centre of Southeast Asian Studies, described in the report of the dean of the faculty of Economics and Politics, belong equally to the faculty of Arts. The Centre for Aboriginal Affairs has now been transferred from the department of Anthropology and Sociology, where it was under the direction of Dr Colin Tatz, to the faculty of Law, but research in Aboriginal languages continues in the department of Linguistics, and within the department of Music Aboriginal music forms an important part of the increasing activity in the field of non-Western music.

The Centre of General and Comparative Literature, which was instituted towards the end of 1970 under the direction of Mr D. C. Muecke, held a series of monthly seminars on Structuralism and Literary Studies. These were well attended by staff and students from language and literature departments as well as those interested in the social sciences.

The Board of American Studies was successful in obtaining a grant of \$15,000 from the American Council of Learned Societies, to be matched by an equal grant from Monash, for the purchase of books and periodicals mainly in the fields of literature, history and politics.

In the planning of a new Centre of Environmental Studies, an important contribution is being made by the departments of Geography and of Anthropology and Sociology.

Certain periodicals continue to be published mainly or solely by Monash Arts departments. These include *The Australian Journal of French Studies*, *Apeiron*, a journal for ancient philosophy and science (Classical Studies), *Komos*, a quarterly of drama and the arts of the theatre (English), *Linguistic Communications* (Linguistics and Japanese) and *Melbourne Slavonic Studies* (Russian).

Public Lectures on Visual Arts

In first term a series of six public lunch-hour lectures on architecture was given. The lecturers were: Mr Robin Boyd, Dr J. A. L. Matheson, Mr E. Graeme Robertson, Professor F. W. Ledger, Mr Harry Seidler and Mr David Yencken.

Accommodation

The plans for stage 1 of the southern extension to the Menzies Building, consisting of the ground floor and two floors to house the department of Geography, had been approved in 1970. In December of this year the AUC gave its approval for stage 2, consisting of six further floors, as a "green light" project. Although the construction of stage 2 cannot be started before the beginning of the new triennium in 1973, the two stages can now be regarded as parts of a single continuous project.

*Faculty of Economics and Politics—Dean: Professor D. Cochrane,
B.Com. (Melb.), Ph.D. (Cantab.)*

Undergraduate Students

The demand for places in the course leading to the first degree offered by the faculty, the Bachelor of Economics degree, increased dramatically in 1971: first preference applications for the course rose from 780 in 1970 to 1,244 in 1971; in 1970 approximately 2,600 applicants had included the B.Ec. course in their first three preferences, and in 1971 this number had increased to over 4,300. The consequence of this pressure on the course was a substantial rise in the matriculation score required for entry.

There was a total enrolment of 1,554 undergraduate students in the B.Ec. course in 1971.

The higher quality of the first year entrants has been reflected in the annual examination results. On the basis of their (November) 1970 results 81 first year students were called up to the faculty unsatisfactory progress committee; in 1971 only 37 first year students have been required to appear.

Another consequence of the demand for places in the B.Ec. course was the increase in the numbers of students who applied for entry to the second year of the course after successfully completing appropriate Ecops subjects in other faculties. In 1971 60 such transfers were approved.

Enrolments by students of other faculties in first year subjects taught by the Ecops faculty also increased slightly, from 950 subject enrolments in 1970 to 1,018 in 1971.

Graduate Students

The graduate courses offered by the faculty were also the subject of increased demand in 1971. Sixty-one of the 220 applications received for entry into the Master of Administration course were accepted, bringing total Master of Administration enrolments to 153. Sixty-five students were enrolled for the degree of Master of Economics, compared with an enrolment of 36 in 1970. The department of Politics supervised 29 candidates working for the degree of Master of Arts, and two for the M.Ec. degree in Politics.

Ph.D. enrolments totalled 14 in the department of Economics, and 4 in the department of Politics.

Graduands

Three hundred and thirty-two candidates graduated with the degree of Bachelor of Economics in 1971, 34 of them honours students. Eleven Bachelor of Arts graduands were awarded honours degrees in Politics. During the year 11 candidates completed requirements for the degree of Master of Economics, and Ian Alexander Urquhart was the first

graduate of the Master of Administration course; he also had the distinction of gaining the Beckingsale Management Award of \$500. One student graduated with the degree of Master of Arts in Politics.

The degree of Doctor of Philosophy from the department of Economics was awarded to Tran Van Hoa for his thesis entitled "Sampling Properties of Mixed Linear Simultaneous Equation System Estimation in Finite Samples".

Rex Mortimer obtained his Ph.D. in the Politics department; his thesis was entitled "The Ideology of the Indonesian Communist Party under Guided Democracy".

Staff

The expansion of the graduate school in particular has placed an additional strain on the resources of the faculty. In 1971 only slightly fewer difficulties were encountered in the recruitment of senior staff.

Professor Irwin Gross, from the University of Pennsylvania, Philadelphia, was appointed to the faculty's foundation chair in Marketing, and Dr Richard Snape to a chair in Economics—Dr Snape was formerly reader in Economics at Monash. In the Economics department, three lecturers were promoted to senior lectureships, and five new appointments were made to the academic staff—a net gain of three. The Politics department promoted three staff members, but the number of staff remained constant during the year. The number of teaching fellows employed in the faculty rose to forty-three full-time, and twenty-six part-time in 1971.

Office accommodation for staff members has been eased over 1970 and 1971 as this faculty acquired the office space vacated by Education and Psychology in the east wing of the eighth, ninth and tenth floors of the Menzies Building. We will, however, still face a severe shortage of tutorial and seminar rooms until the Psychology department is able to vacate its work rooms on the eighth and ninth floors and the Geography department on the seventh floor.

Research Grants

In 1971 the Australian Research Grants Committee approved grants for this faculty totalling over \$43,000. These funds were awarded to three projects: in the Economics department, Professor F. H. G. Gruen's research into an econometric analysis of protection, and Mrs E. Preston's study of trade between Japan and Australia; and in the Politics department, Dr H. G. Gelber's project entitled "Australia, the United States Alliance and Power Relationships in the Pacific".

In addition to the ARGC grants, the Hospitals and Charities Commission of Victoria has agreed to provide the sum of \$80,000 over the three years, 1972-74, to establish a research group to investigate the economics of health and hospital services, which will work under the direction of Dr J. S. Deeble in the department of Economics,

Leave

A number of faculty members took study leave in 1971.

Economics Department

Professor J. W. McCarty has been resident at the University of Kent undertaking research into the economic history of regions of recent settlement in the nineteenth century. In December 1970 Professor I. A. McDougall took up a short-term appointment as Economic Affairs Officer with the Research and Planning Division of ECAFE; based in Bangkok, he has been investigating the problems of economic development in an extensive area of eastern Asia. Dr W. A. Howard visited a number of American universities and spent some months as visiting professor at the University of Maryland. During the second half of the year Professor A. A. L. Powell and Dr G. G. Pursell both joined the World Bank in Washington. Miss E. B. Downes spent the year with the National Institute for Economic and Social Research in London, undertaking research into aspects of taxation in the UK. Dr N. Bryce accepted a Leverhulme Postdoctoral Research Fellowship at the University of Dundee, to work on graph theory and network analysis. Mr D. G. Gadiel has been teaching and researching at University College, London.

Politics Department

Mrs M. F. Bowman visited a number of British universities, but spent the major part of 1971 working in Oxford under the supervision of the warden of Nuffield on aspects of English local government; she also looked at problems of metropolitanization in various French municipalities. Dr J. Playford also visited Britain and Europe, where he collected material for a projected book on the New Left and took the opportunity to speak to activists in European universities.

Mr J. A. C. Mackie, director of the Centre of Southeast Asian Studies, took advantage of a year's study leave in 1971 to attend the International Congress of Orientalists in Canberra, and to travel to London via Southeast Asia, returning to Australia through the USA and Japan.

Visitors and Conferences

DEPARTMENT OF ECONOMICS

The department of Economics continued its practice of inviting distinguished visitors to act as special lecturers in 1971, and Professor William Vickrey (Columbia University), Professor Alan Walters (London School of Economics) and Dr Richard Zecher (University of Chicago) all presented courses, and contributed to the expanding seminar programme offered to staff and graduate students. This programme is coming to play an increasingly important role in the graduate school; in 1971 over seventy seminars were held during the academic

year, with large numbers of distinguished overseas and Australian scholars presenting papers. A few are listed below:

Professor J. Durbin, London School of Economics
Professor J. Wilczynski, Duntroon
Dr W. M. Corden, Oxford
Professor S. Weintraub, Pennsylvania
Professor Chow, Pittsburgh
Professor A. Prest, Manchester
Professor Keith Hancock, Adelaide
Professor J. Walsh, Southern Methodist University
Professor P. Burley, La Trobe

In August 1971 the department acted as host to the Australasian Conference of Econometricians. Twenty-six papers were presented to the 170 delegates who attended, and several scholars distinguished in this field were invited to head the discussion and to read papers—Professor J. F. Helliwell, University of British Columbia; Professor L. Klein, University of Pennsylvania; Professor A. Zellner, University of Chicago, and Dr R. L. Crouch, University of California at Santa Barbara. During their stay these visitors also contributed to the seminar programme mentioned previously.

A number of staff from the department took part in conferences in 1971: Early in the year Dr J. S. Deeble attended a World Health Organization Consultation in Geneva, which dealt with statistical aspects of health services, and in August, with Mr S. Lazarus, attended the Conference of the Australian Society for Epidemiology and Research in Community Health held at Surfers' Paradise. In October Professor R. H. Snape attended the Fourth Pacific Trade and Development Conference in Ottawa, Canada. Professor I. Gross was a delegate to the Market Research Society Conference in Canberra, and Professor A. K. Collins took part in a seminar on Training Schemes for Industry and Commerce, in Canberra.

DEPARTMENT OF POLITICS

In August 1971 the Politics department provided the venue for the thirteenth Annual Conference of the Australian Political Studies Association (APSA). Dr D. J. Goldsworthy and Dr P. Y. Medding were responsible for organizing the conference, which lasted for three days, during which twenty papers were presented to 130 delegates. Most staff members in the Politics department were involved in the conference. Several members attended other conferences here and abroad. In February Dr H. G. Gelber presented a seminar at the University of Chicago Center on Policy Study, on Arms Control of Foreign Policy, and in March he attended the Norwegian Institute of International Affairs seminar which was concerned with aspects of the role of nuclear weapons in politics. Mr R. J. Beveridge, Dr A. B. Davidson and Dr A.

Suhrke attended the International Congress of Orientalists in Canberra. In September Professor H. Feith delivered the Flinders Asian Studies Lecture at the Flinders University Centre of Asian Studies.

A number of distinguished scholars visited the department during the year: Dr V. Arkhipov, from the Academy of Sciences in Moscow, presented a seminar in April on "Southeast Asian Studies in the USSR." Three seminars were held in July: by Professor Joyce Lebra, professor of History at the University of Colorado; Professor Jerome Frank from the department of Psychiatry, John Hopkins School of Medicine, who spoke on "Sanity and Survival"; and Professor Makoto Momoi from the National Defence College, Tokyo, whose paper was entitled "Japan: Some Strategic Problems in the 1970s". Mr M. Howard from All Souls, Oxford, and Professor Graeme Duncan from the Politics department, University of Adelaide, also visited Monash during the year, the latter to present a seminar on Curricula Innovations.

CENTRE OF SOUTHEAST ASIAN STUDIES

In spite of the absence of its director, Mr J. A. C. Mackie, on study leave during 1971, the centre continued to play an active role. In 1971 twenty-four seminars were organized by the centre, and papers were presented by Australian academics and by overseas visitors. Some of the speakers and their topics are listed below:

Mr Nugroho Notosusanto, department of History, University of Indonesia, "The Peta Army in Indonesia 1943-45".

Professor Philippe Develliers, professor of the Institute of Political Studies at the University of Paris, and Director of Southeast Asian Studies at the National Foundation of Political Science, "The Present Stage in the Paris Talks".

Dr Masri Singarimbun, research fellow in the department of Demography, Australian National University, "Patterns of Fertility Control in Rural Java".

Professor Charles S. Blackton, professor of History, Colgate University, Hamilton, New York, "The Spring 1971 Insurgency in Ceylon".

Professor Bruce Glassburner, department of Economics, University of California, "Indonesia's New Order Economy: A Qualified Success Story?".

Dr Mubyarto, head of the Agricultural Economics Institute at Gadjah Mada University in Jogjakarta, "Planning in Indonesian Agriculture".

Monash Economics Lecture

Professor A. A. Walters, from the London School of Economics, delivered the fifth Monash Economics Lecture in the Alexander Theatre on 26 July 1971. The title of Professor Walters' lecture was: "A Failure of Economics?".

Faculty of Education—Dean: Professor S. S. Dunn, B.A., Dip.Ed. (Adel.), B.Ed. (Melb.), F.A.Ps.S., F.A.C.E.

Early in 1971 Professor R. Selby Smith accepted an appointment as principal of the Tasmanian College of Advanced Education. The rapid growth of the faculty is a tribute to his wise leadership since its inception. Professor S. S. Dunn was appointed dean to succeed him.

Students

In 1971 with a quota of 400 the faculty was able to accept all Monash graduates who applied with Monash as their first preference and a limited number of scholars from other universities. Not all graduates of Victorian universities wishing to study Dip.Ed. were accommodated in the universities and the Education Department instituted a course at the secondary teachers colleges.

It seems that the position in 1972 will deteriorate further. For some 1,500 applicants for full-time places at the universities for Dip.Ed. only a little over 1,000 places will be available, 500 of these at Monash. Not all Monash graduates who apply for Monash will receive offers of a place, although 95 per cent of first offers have been reserved for Monash graduates and over 500 offers can be made to our graduates. Some Monash graduates have been accepted in the quotas of the other two universities. There will also be Dip.Ed. courses offered at both Monash and secondary teachers colleges.

There has also been a rapid increase in numbers enrolling for the B.Ed. and higher degrees. The rate of expansion proposed for B.Ed. courses in Victorian universities is not as great as the numbers predicted who will seek to study for this degree and quotas may be necessary for 1973.

Master's by course work, is proving popular. However, some students find working for a Master's degree while teaching full-time is difficult to sustain and fail to complete their degree. Those who receive some time off from the Education Department find this a great help not only for immediate study but are also able to participate more fully in the academic life of the faculty. The number of Ph.D. students continues to increase and in 1971 there were eight full-time students as well as twelve staff members enrolled for this degree.

Staff

Dr T. H. MacDonald was appointed as a senior lecturer and Mr R. T. White as a lecturer for 1971. The vacant chair, following the appointment of Professor Dunn as dean, has been accepted by Dr R. J. Selleck, who will be responsible for the area of Historical and Philosophical Foundations and will take up his appointment early in 1972.

Professor R. Taft spent the early part of 1971 as a visiting professor at the East-West Center in Hawaii and in September Professor Marie

D. Neale was invited by the President's Committee on Mental Retardation, Washington, to attend and contribute to the First Pacific Forum on Mental Retardation in Honolulu. In July Dr M. Balson attended the XVIIth Congress of Applied Psychology (International) at Liège (Belgium).

From June to August Professor G. Bantock of Leicester was a visiting professor to the faculty and his seminars aroused considerable interest. Also many distinguished overseas visitors spent short periods in the faculty.

The Victorian Education Department again made a significant contribution to the work of the faculty by seconding experienced teachers to help with method work. We are most grateful for this help.

Buildings

The building occupied in 1970 met faculty needs in 1971 but will not be able to meet the demands of 1972, when some accommodation in the Law faculty will be used. The Australian Universities Commission has indicated that a major extension to the Education building has been accepted as a "green light" project and planning will proceed in 1972.

Curriculum

In 1971 the Dip.Ed. programme referred to as the "Alternative Course" was again offered. There were also some modifications to the standard course—in particular, a greater use of electives. Some further modifications are planned in 1972. Four groups will be formed, each with a staff team. With a smaller number of students in each group it is hoped that staff/student contacts will be increased.

In addition the part-time Dip.Ed. course for tertiary students was heavily oversubscribed. Twenty-two students were selected from the University, colleges of advanced education, teachers colleges and one was a training officer from industry. All students completed the course "Methods and Practice of Tertiary Teaching" and most will be continuing with the remaining two units for their Dip.Ed. in 1971.

The very extensive range of subjects offered at B.Ed. and the semester organization of the course appeals to students most of whom are full-time teachers. In 1971 eighty-eight students completed their B.Ed. and the number completing will increase each year. The Advanced Methods courses have proved attractive. The fact that all students are graduates who attend because of interest ensures that B.Ed. students are an excellent group to teach despite the problems of part-time study.

The courses currently offered in Special Education are popular. However there is a need for specialist courses for experienced teachers at the pre-school and primary level who are not university graduates which is not being met. To operate successful courses in Special Education requires small student/staff ratios and specialist clinical

facilities. Some specialist equipment is being provided by a grant from the William Buckland Foundation and the Council has created a "Special Education Fund" into which donations can be channelled.

Research

Staff have been successful in obtaining funds from a number of grant-giving organizations:

Professor R. Taft and Dr T. Hore

Australian Research Grants Committee

Mr L. Mackay

Australian Research Grants Committee

Mr J. Clift/Mr H. Batten/Mr G. Burke

Australian Advisory Committee on Research and Development in Education

Mr J. Clift/Dr Turney

Australian Advisory Committee on Research and Development in Education

Mr J. Clift/Mr G. Burke/Dr Katz/Dr Connor

Australian Vice-Chancellors' Committee (SCREEM)

Professor M. Neale

Australian Advisory Committee on Research and Development in Education

Professor P. Fensham/Professor R. Taft

Commonwealth Advisory Committee on Advanced Education

Dr F. Hunt

Social Science Curriculum Development

Professor P. Musgrave

Commonwealth Advisory Committee on Advanced Education

Others are able to operate on faculty funds. A number of books and papers have been published.

In addition, theses by higher degree students are now coming forward at a regular rate. It has been pleasing to read the favourable comments of overseas examiners on some of our first Ph.D. theses. Three Ph.D.s were awarded in 1971.

Higher Education Research Unit

This Unit is an all-University Unit concerned with the improvement of teaching in the University and with research on tertiary education.

Mr Clift was appointed director after Professor Dunn was appointed dean. Broad policy is provided by the Professorial Board's Standing Committee on Education of which Professor P. J. Fensham is chairman. A brief report prepared by the director follows:

During the year reports on Exclusion Policies and Procedures, Input

Audit and Work Loads were prepared for the Standing Committee on Education. A pilot programme has been undertaken to evaluate the methodology for looking at work loads as perceived by the students as well as the staff across all areas of work and years of study. Following a request from Unesco, HERU undertook responsibility for supplying information on Monash to the International Institute for Educational Planning for a study entitled "Planning the Development of Universities". At the request of the activities officer in the students' Union, HERU conducted an evaluation study of an efficient reading course run for the students' Union by the Advanced Reading Academy. The students' Union intends to run a course in 1972 and HERU will develop the syllabus for the course and at the same time conduct a research and development project into the use of study carrels for teaching skills of study and efficient reading.

The evaluation of the Engineering 101 course and Diploma in Education Group 71 was continued and a special study group was formed to look at the objectives and techniques of laboratory teaching. Staff of HERU also took part in a number of seminars organized by various departments to discuss educational matters. Further issues of *Notes on Higher Education* were prepared throughout the year and circulated to University staff. Two grants have been received from the Australian Advisory Committee on Research and Development in Education—one to Mr Clift/Mr Batten/Mr Burke for research into the cost effectiveness of microteaching, and the other to Mr Clift as part of a project being organized by Dr Turney of the University of Sydney for research into the techniques for development of teaching behaviour. The Australian Vice-Chancellors' Committee (SCREEM) has supported Mr Clift/Mr Burke and Professor Katz/Dr Connor of the University of New South Wales to survey the use of television in university teaching.

During 1971 Professor Dunn and Mr Clift were responsible for offering the Methods and Practice of Tertiary Education unit of the Diploma in Education (Tertiary).

*Faculty of Engineering—Dean: Professor K. H. Hunt, M.A. (Oxon.),
M.Mech.E. (Melb.), C.Eng., F.I.Mech.E., F.I.E.Aust.*

Faculty—General

For the first half of 1971 there was intense examination of the first year of all engineering courses with a view to making the content more relevant and to encouraging the motivation of the student. Unfortunately no formula for revision was found in time for introduction in 1972, but the debate continues at all levels in the faculty. Also connected with this has been the discussion on the committee structure of

the faculty; it is to be expected that much further thought will be given to this in 1972. Some aspects of the above deliberations spring from the prior discussions, mostly in 1970, on the best manner of student participation in faculty affairs.

Buildings

During November preliminary work was started on building 6, the eastward extension of building 4, but a further long delay has been experienced. The new laboratories, teaching rooms, and staff rooms in building 6 will, regrettably, not be of any effective use until well into 1973, and pressures on accommodation will be felt while building is proceeding. In particular there are at present too few rooms for academic staff, and during 1972 all departments face increasing difficulties.

The last four bays in building 5 were completed during 1971, made possible by the supplementary grant gained for the necessary building operations to be undertaken. Within the bays the large wind tunnel and anechoic chamber were commissioned.

Staff

In November 1971 Mr B. D. Shields took up duty as secretary to the faculty in the place of Mr T. O. L. Short, who transferred to the faculty of Medicine.

Regrettably there was no increase in the establishment of academic or support staff for 1971. New members of staff filling vacancies are: Mr D. W. Lynch, senior teaching fellow, and Dr K. N. Han, lecturer, in the department of Chemical Engineering, Dr R. G. Mein, lecturer, in the department of Civil Engineering, Dr C. S. Berger, senior lecturer, Mr T. S. Dillon, lecturer, and Mr D. B. Hop, teaching fellow, all in the department of Electrical Engineering, Dr R. S. Alfredson, lecturer, in the department of Mechanical Engineering, and Dr D. P. Parker, Dr Z. H. Stachurski and Dr J. R. Griffiths, lecturers, in the department of Materials Engineering.

The second chair in the department of Civil Engineering remained unfilled.

During the year the faculty was pleased to see the promotion to the rank of associate professor of Dr P. Dransfield and Dr A. Williams in the department of Mechanical Engineering, and Dr E. M. Cherry, department of Electrical Engineering.

Worthy of mention also was the award of the 1970 medal to Mr G. Arndt for the best paper presented to a Section of The Institution of Production Engineers, London.

Staff who left for study leave during 1971 were Professor K. H. Hunt, Professor N. W. Murray, Professor J. D. C. Crisp, Dr W. E. Olbrich, Dr P. Grundy, Mr A. Holgate and Dr P. F. Thomson, and this

activity continues to contribute a great deal to the scholastic endeavour of the faculty.

Undergraduate Students

The number of students enrolled in first year was 332, indicating a continuing increase (298 in 1970). Nominally the quota was 340, but some students withdrew after the start of the first term. Total enrolment in all four years was about 940 (850), the numbers completing final year being: Chemical 24 (25), Civil 60 (51), Electrical 35 (29), Mechanical 24 (27), numbers in brackets being those quoted in the 1970 Report. Students taking Materials Engineering have reached only second year level, and numbered 16, which is most encouraging at this stage. Of the 139 graduating, 77 qualified for honours (17 first-class, 39 second-class, 21 third-class). Fewer students entered third year after having previously qualified for professional diplomas in the colleges of advanced education in Victoria.

It is recognized that useful experience continues to be gained from the work done and assistance given by the Higher Education Research Unit, particularly to do with the first year studies.

Graduate Students and Research

The number of students enrolled for higher degrees rose from 104 in 1970 to 129, though it must be pointed out that no figure is exact here, since both enrolment and examining continue right through the year. Thirteen (11) Ph.D.s were awarded, the increase showing a healthy trend.

The Australian Research Grants Committee provided a total of \$38,679 in support of nine research projects (in 1970 eight were supported). Judging by the recent list of approved grants for 1972, the faculty is now apparently gaining the recognition from this body that many think it deserves. Substantial assistance for some nineteen research projects was provided by other organizations and the sources of funds were principally: The Zinc Corporation Ltd.; M.D. Research Co. Pty. Ltd.; The Water Research Foundation; The Australian Road Research Board; The State Rivers and Water Supply Commission of Victoria; The Electrical Research Board; The Radio Research Board; The Department of Supply; The Australian Welding Research Association; ICIANZ; Rocla Concrete Pipes; BHP; and The William Buckland Foundation.

The Harold Armstrong Memorial Fund, administered through a faculty committee, supported two visitors who took part in the Harold Armstrong Conference on "Production Science in Industry" of The Institution of Engineers, Australia, held in August 1971. This fund also contributed to research projects in the departments of Materials Engineering and Mechanical Engineering.

During 1971 three Monash engineering graduates were supported by grants from the Sir Alexander Stewart Memorial Fund for projects of an imaginative nature.

Staff and others have attended and contributed to various conferences including the Annual Conference of The Institution of Engineers, Australia (Adelaide), The Fourth Australasian Conference on Hydraulics and Fluid Mechanics (I.E.Aust.) (Melbourne), The Fifth AINSE Heat Transfer and Fluid Flow Conference (Lucas Heights), The Fifth International Symposium on Traffic Flow Theory and Transportation (California), The Australian Welding Research Association's Symposium on Pressure Vessels (Sydney), seminars in Canberra and Melbourne on Mathematical Modelling in Hydrology and on Water Pollution Policies for Industry, The First Australian and New Zealand Geomechanics Conference (Melbourne), The Third Australasian Conference on The Mechanics of Structures and Materials, Conference on Developments in Bridge Design and Construction (Cardiff), Canadian Applied Mechanics Conference (Calgary), Universities' Transport Study Group Conference (Sheffield), Electrical Engineering Power Symposium (Monash), CIGRE Conference on Switching Equipment (Adelaide), Power Conference and Control Symposium (Sydney), Microelectronics Conference (Sydney), IREE Convention (Melbourne), Australian Physiological and Pharmacological Society Meeting (Canberra), Symposium on Digital Computer Control (Melbourne), The Ninth International Conference on Medical and Biological Engineering (Melbourne), The Materials and Electronics Industries Conference (I.E.Aust.) (Perth), The Annual Conference of The Society of Automotive Engineers, Australasia (Melbourne), The Annual Conference of The Australian Corrosion Association (Melbourne), Materials Group Conference, AIM (Victoria), The Second Australian Reinforced Plastics R & D Symposium (Sydney), The Noise Zoning Conference of The Australian Acoustical Society (Melbourne), Automation and Control Applications Forum (I.E.Aust. and I.Mech.E.) (Melbourne), The Harold Armstrong Conference "Production Science in Industry", (I.E.Aust.) (Melbourne), The Fourth International Conference on Heat Transfer (Versailles, France), The Third International Conference on Wind Effects on Buildings and Structures (Tokyo).

The growing extent of the contribution from research activities is evident from the above list, and from the list of publications which will be assembled separately. Typical research highlights from the work in the departments are:

Several full-size panels from the Westgate Bridge, including panels donated by the Lower Yarra Crossing Authority and World Services and Construction Pty. Ltd., were tested in the department of Civil Engineering for their buckling behaviour and a half-size model was also constructed and tested. This work is continuing.

A very significant step forward in the understanding of radial heat

transfer in packed beds has been made in the department of Chemical Engineering. The packed beds of interest are those in small diameter tubes packed with catalyst and cooled externally. Such tubes are employed for highly exothermic reactions.

From the same department the first two Master's theses on waste treatment and water pollution were approved during the year; one was concerned with biological oxidation in the trickle filter, and the other with biological disposal of whey from cheese factories.

A joint project between the control and biophysics groups within the department of Electrical Engineering has resulted in a small digital computer, completely designed and constructed here, being used to achieve on-line control of respiration and anaesthesia in sheep. The computer is programmed to adjust automatically gas flows, anaesthetic vapour concentration, respiratory pump excursions, and to maintain the physiological variables at the desired values. An initial report on this work was given at a recent international meeting held in Melbourne. Such interest was aroused that a special demonstration was arranged for a number of overseas and local delegates to the meeting. To the best of our knowledge this is the first time a digital computer has been used in this way.

Of growing interest here and in the United States is the work of Professor Hunt, to do with constant-velocity couplings of different geometrical patterns. The work has indicated their possible use in many fields of application.

The investigation in the department of Materials Engineering of stress relaxation phenomena associated with welded steel plate has contributed to the alteration of the international code controlling the stress-relieving of steel pressure vessels.

Visitors

Prominent among the many visitors from outside Victoria during 1971 were:

Mr A. J. Young, Head ICI Central Laboratory, UK

Professor J. W. Eldridge, department of Chemical Engineering, University of Massachusetts

Dr E. T. White, department of Chemical Engineering, University of Queensland (who gave a series of lectures on crystallization)

Professor Nicholas J. Hoff, department of Aeronautics, Stanford University (for two months on a grant from the Australian-American Foundation)

Professor C. J. Fleming, department of Civil Engineering, University of Natal

Professor E. M. Shoemaker, Simon Fraser University, Canada

Professor C. A. Cornell, Massachusetts Institute of Technology

Professor P. Hammond, visiting professor, department of Electrical Engineering, University of Southampton (for about six weeks)

Dr D. W. Hill, Royal College of Surgeons, London

Professor G. C. Agarwal, department of Systems Engineering, University of Illinois

Dr Michael Bookallil, department of Anaesthetics, University of Sydney

Professor D. H. Bekkering, Institute of Medical Physics, Utrecht

Professor L. Stark, department of Optometry, University of California

Dr E. A. King-Smith, Medtronic Inc., Minneapolis

Professor P. J. Florey, Stanford Research Institute, California

Professor Yasuo Tamura, Waseda University, Tokyo

Professor G. N. Sandor, Rennselaer Polytechnic Institute, USA

Professor Hugh Ford, department of Mechanical Engineering, Imperial College, University of London

Professor C. N. de Silva, department of Mechanical Engineering Sciences, Wayne State University, USA

Mr Kistler, President, Kistler Instrument Ltd., Hants.

The stimulus received from these visitors, both in teaching and in research, is appreciated deeply in all departments. The exchange of views, and the contacts made, are considered to be most important; sometimes the benefits are not by any means all one way!

Gifts

An unconditional grant of \$2,000 to assist the advancement of engineering research and studies in the faculty was received from Esso Standard Oil (Australia).

Bradford Insulation (Vic.) Pty. Ltd., kindly donated a large quantity of mineral wool batts, sufficient for the manufacture of the 1,000 sound-absorbing wedges in the anechoic chamber recently completed in the department of Mechanical Engineering. As always support of this kind is most valuable to the enhancement of the potential in the laboratories.

Links with Practice

Both staff and students continue to forge links with practising engineers through undergraduate projects, tutorial schemes and consulting work undertaken in close liaison with those in practice having special technical problems. As part of the continuing effort to help practising engineers, two intensive courses were held. The topics presented were Noise and its Control and Selected Topics in Minerals Processing. An attempt was made to determine the true cost of the effort necessary to mount a course of this kind.

The members of the faculty board from outside organizations have again given splendid support to matters of the faculty, and for this we express to them our thanks.

Faculty of Law—Dean: Professor Enid M. Campbell, LL.B.(Hons.), B.Ec. (Tas.), Ph.D. (Duke), Barrister and Solicitor (Tas.); from 1 January to 29 August 1971. Professor David E. Allan, M.A. (Cantab.), of the Middle Temple, Barrister; from 30 August to 31 December 1971

Students

Total enrolments in the faculty have continued to increase. In 1970 there were 910 undergraduate students of whom 829 were full-time. In 1971 there were 967 undergraduate students of whom 869 were full-time. Approximately 85 per cent of the undergraduate students are male. The quota for first year students was increased to 310.

There were 19 candidates enrolled for higher degrees in 1971. Seven were candidates for the Ph.D., 13 candidates for the LL.M., and 1 preliminary candidate for the LL.M. All the Ph.D. students were members of the teaching staff of the faculty. Of the candidates for the LL.M., 7 were members of the teaching staff and 4 were full-time students.

Staff

Professor David E. Allan was appointed The Sir Owen Dixon Professor of Law and dean of the faculty of Law for a period of five years from 30 August 1971. Mr L. McCredie was appointed sub-dean in August 1971 in succession to Mr H. B. Connell.

Several new appointments were made during the year:

Professor R. S. O'Regan, B.A., LL.B. (Q'ld.), LL.M. (Papua and N.G.), was appointed associate professor and senior law library adviser. He formerly held a personal chair in the Law school of the University of Papua and New Guinea.

Mr J. L. Dwyer, LL.B., M.A. (Melb.), was given a fractional appointment as a lecturer. Mr Dwyer previously was a lecturer in the Law school of the University of Durham.

Mr A. C. Farran, LL.B. (Hons.) (Melb.), was appointed to a lectureship. Mr Farran had previously held various positions with the Department of Foreign Affairs and the Department of Defence.

Mr L. C. Morris, LL.B. (Melb), M.C.L. (S.M.U.), was appointed to a lectureship. Mr Morris was formerly a senior teaching fellow in the faculty of Law.

Dr M. C. Pryles, LL.B. (Melb.), LL.M., S.J.D. (S.M.U.), was appointed to a lectureship. Dr Pryles previously was a senior teaching fellow in the faculty of Law.

Miss S. M. Walters, LL.B. (Hons.) (Birm.), was appointed to a lectureship. Miss Walters was previously a senior teaching fellow in the faculty of Law.

Mr D. K. Srivastava, M.A., LL.M. (Ban.), was appointed to a senior teaching fellowship, and Mr T. R. Carney, LL.B. (Hons.), Dip.Crim. (Melb.), and Mr J. R. Steelman, B.A. (St. Joseph's Coll., Phil.), LL.B. (Rutgers), were appointed to teaching fellowships.

A number of staff has been promoted during the year: Professor R. W. Baxt, formerly senior lecturer, was promoted to associate professor. Mr R. H. Miller was promoted from a lectureship to a senior lectureship. Professor F. R. Beasley was appointed a Fellow of the faculty of Law. Dr I. C. F. Spry was awarded an LL.D. by the University of Melbourne for his book, *Equitable Remedies*.

Resignations have been received during the year from Mr A. Bissett-Johnson, who took an appointment at the University of Newcastle (UK), Mr H. B. Connell who became Chief Secretary of Nauru, Mr P. F. P. Higgins who accepted an appointment at the University of Wales Institute of Science and Technology, and Mr N. J. Williams who accepted a chair at the Osgoode Hall Law School, York University.

Members of staff who took study leave during the year were: Professor D. E. Allan, Professor P. L. Waller, Professor R. W. Baxt, Mr P. F. P. Higgins, Mr F. A. Trindade and Mrs A. H. Lahore.

Curriculum

The curriculum review, which was undertaken in 1969, was concluded and the necessary legislation required to introduce the new curriculum was passed. The new curriculum, which will now come into force in 1972, retains the concept of two degrees: the Bachelor of Jurisprudence and the Bachelor of Laws. However, the B.Juris. is now largely prescribed so far as its law content is concerned, whilst the LL.B. is composed largely of optional units. B.Juris. candidates will normally not take law subjects until the second year of their degree, but attention is being given to involving them in a voluntary programme within the Law faculty. The introduction of the semester system has given considerable flexibility to the planning of special optional courses. From 1972 it will be possible to take a B.Sc./LL.B. as a combined course, as well as a B.A./LL.B. and a B.Ec./LL.B.

In the planning of the new courses, considerable emphasis has been placed on small group seminar teaching and on the involvement of senior students in supervised research projects. A number of completely new courses have therefore been planned for 1972.

Meanwhile, planning has proceeded on the proposal for an LL.M. by course work and minor dissertation, which it is hoped to introduce in 1973.

Faculty Government

A staff committee completed its study of the government of the faculty and made a number of recommendations to the faculty board. The faculty board has not yet considered those recommendations which relate to the composition of the faculty board, but it has approved all the other recommendations which deal mainly with the structure and membership of standing committees within the faculty. Most of these recommendations have now been implemented.

*Faculty of Medicine—Dean: Professor R. R. Andrew, M.D., B.S.
(Melb.), F.R.C.P., F.R.A.C.P.*

By the end of the year, the University was no clearer about the possible start of the Medical Centre referred to in the 1970 Report of Council, the year in which the Minister for Health announced government approval and financial support. This was the third occasion the University had been informed of agreement by the government to the campus hospital. A meeting of the Monash Medical Centre Joint Planning Committee (which includes the chairman of the Hospitals and Charities Commission) on 15 December reaffirmed the agreement of the University to establish a campus teaching hospital of not more than 800 beds.

The year was notable in the clinical areas for the inclusion of Geelong Hospital in the undergraduate teaching programme. The faculty had responded willingly after considerable investigation to overtures from that hospital which started in 1968. Fifth year students in obstetrics and paediatrics now attend and sixth year in medicine and surgery. In all 56 students out of 282 in fifth and sixth years were involved. The experiment has been mutually satisfactory and provides a useful experience in a hospital, large and skilled, but with a somewhat different ethos from the metropolitan teaching hospitals.

Negotiations have been started between the University and hospital towards ultimate formal affiliation.

It is interesting to note that the Carnegie Report, "Higher Education and the Nation's Health", October 1970, advocates the increasing use of what it calls "area health education centres" in USA for students on a rotational basis. Geelong Hospital and our programme corresponds very closely to the Carnegie concept.

Students

There are 929 undergraduates and 20 of these have taken an extra year for B.Med.Sc. There are 182 women (19.6 per cent). It is interesting to observe the increasing female entry which is occurring in all Australian medical schools. At Monash the female percentage of enrolments is as follows:

1961, 10 per cent; 1962, 8.5 per cent; 1963, 19.4 per cent; 1964, 12.5 per cent; 1965, 16.1 per cent; 1966, 14.6 per cent; 1967, 17 per cent; 1968, 14.4 per cent; 1969, 21 per cent; 1970, 20.5 per cent; 1971, 27.7 per cent. By virtue of the Medical Act, any discrimination by sex is illegal (Section 38). The alleged high drop-out rate of women compared to men is being investigated by Mrs Ione Fett, department of Anthropology and Sociology, and the faculty is actively co-operating.

The entry of overseas students is declining: Singapore has provided

none for three years, 15 of the total 22 entry in 1971 coming from Malaysia. The table shows the recent position in Australia:

*Overseas Students Admitted to Australian Medical Schools
1969, 1970 and 1971*

University	1969	1970	1971
Sydney	5	3	n.a.
NSW	36	11	19
Melbourne	7	10	n.a.
Monash	19	24	22
Adelaide	—	—	n.a.
Queensland*	7	10	9
Western Australia*	1	7	4
Tasmania*	—	6	9
	75	71	63

* Second year entry

Monash and NSW	55 (73%)	35 (49%)	41 (65%)
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Source: Returns from universities

It can be seen that Monash and New South Wales really control the situation. The most recent figures (1968) show that 521 overseas students (9.1 per cent) are embedded in eight Australian medical schools; 80 per cent of these come from Malaysia and Hong Kong. The whole question is being investigated by a committee of faculty which has been asked to make recommendations.

After two years of student representation on faculty board and executive, Unsatisfactory Progress Committee and Selection Committee, it can be said without reservation that their contribution has been responsible and helpful.

The graduate student population is now 105. These candidates are distributed as follows: B.Med.Sc., 20; Ph.D., 84; M.D., 1.

Staff

There are 102 tenure and 56 non-tenure; 73 on campus and 85 downtown. With 1,335 EFTS, the student/staff ratio is 7.2.

Professor Firkin has been appointed Sims Travelling Professor for 1972. This prestigious British Commonwealth appointment was held in 1967 by Professor Hudson.

A new type of appointment which many of the faculty hope will set

a valuable precedent was the appointment of Mr Clark McNeur to a part-time (six-tenths) associate professorship in surgery. Associate Professor McNeur is a senior orthopaedic surgeon at Alfred Hospital. The contribution of distinguished clinicians in joint roles such as this is confidently expected to be very considerable. The faculty is enabled to enjoy the services of specialists, embedded in University departments but still active in the community, without increasing the number of departments and professors.

Research

Research is active in all departments. One index is a survey during the year which showed that at the most recent meeting of the relevant scientific society Monash departments were responsible in aggregate for 16 per cent of all contributions (range 4 per cent–33 per cent). In aggregate 353 papers were published.

Another indication is the outside grants which this year were \$561,674 (1970, \$518,521).

The clinical staff still carries, unacknowledged by the AUC, a very large load of graduate training estimated at about one-third of the total undergraduate commitment. All interns and residents of affiliated hospitals are included in the training programme, as are doctors in graduate continuing education. Because no formal supervised degree or diploma course is involved, this teaching cannot be counted in the EFTS formula. The Department of Education and Science, Department of Health and the AUC have made inquiries over several years and it has been adumbrated at a high level that the question would be investigated but nothing has eventuated.

Curriculum

A curriculum revision committee has sat on a number of occasions throughout the year, commissioned by faculty to examine in a comprehensive way the whole curriculum. All are anxious to avoid piecemeal meddlesome changes with doubtful gains and considerable upheaval to staff and students. There are considerable extramural constraints; the State Medical Board which has certain statutory requirements (as does the General Medical Council) since our qualifying degree serves as a registration standard; the hospital facilities available, now over-stretched; and the budget granted by the AUC from which follows the student/staff ratio. It appears unlikely that there will be any radical changes in the next few years; these, if found desirable, may have to wait on the establishment of the Medical Centre on the campus.

In this context the results of the Educational Council for Foreign Medical Graduates (USA), which nearly all final year students now take, show that at least one international standard is satisfactorily met; 135 students sat and 127 (94 per cent) passed (the global pass rate for nearly 18,000 students sitting is 30 per cent).

*Faculty of Science—Dean: Professor K. C. Westfold, B.Sc., M.A.
(Melb.), D.Phil. (Oxon.)*

Teaching

In 1971 a relaxation in the B.Sc. regulations to require only one laboratory subject for the whole course was agreed to. At the same time certain specified course combinations of Mathematics and Information Science with Electrical Engineering and Economics have been approved by the faculty board. These new courses complement the previously approved Chemistry-Economics combination designed for students aiming at a career in industry. A combined Science-Law course was approved by Council. An honours course in Immunology taught by the department of Pathology was approved for 1972. New second year subjects in Information Science and Microbiology were introduced in 1971 and will be prerequisites for the third year subjects in these disciplines.

The faculty board has approved provisions in the M.Sc. regulations for Monash graduates to qualify for that degree by presenting their own published or unpublished work for examination, without the requirement of university supervision.

Research

The lists of gifts and grants and publications reported elsewhere give evidence of the level of research carried out in all departments of the faculty.

It may be of interest to mention the entry of the spectroscopy group of the department of Chemistry into the new area of "galactochemistry". Observations using the Parkes radio telescope have identified a new molecular line indicating the presence of the organic substance thioformaldehyde in interstellar space. Such molecules have attracted great interest because of their possible role as life precursors.

Tenders for the installation of the 40cm Jeffree telescope at Mt. Burnett near Emerald have been called. The project has been proceeding on a co-operative basis involving particularly the departments of Physics and Mechanical Engineering in the faculties of Science and Engineering.

Other Educational and Professional Activities

Members of all departments whose subjects are taught at the secondary level are represented on the VUSEB Standing Committee. Other members of staff are involved in the development of courses given in the colleges of advanced education, in lectures in schools and to other bodies, and in broadcasts on radio and television. A book written by Mr Neil Cameron for the School Mathematics Research Foundation has won the Australian Book Publishers' Award for design. An in-service course for sixty teachers of physics was organized by the department of Physics and the annual Mathematical Association con-

ference for teachers of mathematics was again held at Monash, attracting 1,000 participants. The department of Chemistry organized the 8th Australian Spectroscopy Conference and a conference on Reactive Intermediates. The department of Zoology conducted a five-day enrichment course on conservation and applied ecology for over 150 teachers of science and geography.

Personal

Professor R. D. Brown was elected to the Council of the Australian Academy of Science. Professor R. Street who is currently Federal President of the Australian Institute of Physics, became chairman-elect of the Australian Research Grants Committee. Professor R. H. Day is a Visiting Commonwealth Professor to the United Kingdom for the academic year 1971-72. Professor R. W. Cumming was a joint recipient of the Prince Philip Award for Australian Design for 1971; his T Visual Approach Slope Indicator System for guiding aircraft pilots on landing became a world standard during 1971. Mr A. Y. Montgomery received the Australian National Committee on Computation and Automatic Control award for the best paper published in the Australian Computer Journal during 1970. Professor J. W. Warren delivered the 1971 Crosbie Morrison lecture at Clunies Ross House. Professor B. E. Hobbs was appointed to the first chair in the new department of Earth Sciences. He will take up duty in the latter part of 1972.

General

Their occupation of the new Biology building has eased the accommodation problems of the departments of Botany and Psychology, but the completion of the current triennial programme is eagerly awaited so that Psychology can vacate the Menzies building and Botany and Zoology can obtain much needed additional space for research and teaching laboratories. The extensions to the Mathematics building will provide space for the department of Earth Sciences.

Library—Acting Librarian: Mr T. B. Southwell, B.A. (Syd.), A.L.A.A.

By the end of 1971 the University library had grown to over 498,000 volumes, the apparent rise in intake over previous years is explained by the inclusion for the first time of some 24,000 "volumes" represented on the various microforms which are becoming a significant part of any modern research collection. 8,965 periodicals were being currently received.

Stock was distributed as follows: the main library (320,200), the Hargrave Library for the physical sciences and engineering (64,000), the law library (43,000) and the biomedical library with 39,200 on the Monash campus, 17,500 at the Alfred Hospital, 3,700 at Queen

Victoria, and further small collections at the joint library run in conjunction with Prince Henry's and at Fairfield and Royal Park Hospitals.

The library's budget for 1971 was increased considerably, but even so was unable to keep pace with the rapidly rising costs of books and periodicals. It is depressing to report that as a result the number of new books acquired was again less than in the previous year, and certainly less than is necessary to meet the University's needs.

The staff establishment remained virtually unchanged, but service was maintained in spite of increased demand, and, in some areas, particularly the crucial one of reader instruction, even expanded.

As expected, space was at a premium in the Hargrave Library; building work commenced on the extension only late in the year, and no real relief will be felt until mid-1972. Some strain began to show in both the main and the biomedical libraries, the latter indicating a considerably higher level of use than is normal. Plans are in hand for an extension of the biomedical library at the Alfred Hospital, whose accommodation for readers, staff and books are all decidedly sub-standard.

Loans for the year totalled 335,910, an increase of 10.4 per cent over the previous year, the heaviest increase being in the main library (12.7 per cent) and the Hargrave Library (21.9 per cent).

Work proceeded through the year on the magnetic tape "Inventory" file, but only the biomedical library segment was completed. Work began in the long vacation on the equipping of the biomedical stock with machine-readable badges, in preparation for the installation of the new circulation system. Much time was devoted to testing out the mechanical components of the system, and final installation is expected early in the new year.

A computer-based acquisitions system was installed progressively during the year, giving excellent bibliographic control, and work is proceeding on its associated budgeting control system.

The total number of items borrowed from other libraries fell for the first time, to 9,130; although main library borrowings rose slightly, this was more than counterbalanced by falls in all other areas. All areas showed a marked increase in loans to other libraries, the total being 9,148. On balance, 1971 was the year in which Monash arose above the status of mendicant library.

The most notable event of the year was a very sad one. The foundation University librarian, Mr E. H. Clark, who had been in ill health for some years, died suddenly early in October. His wide experience and vision have shaped a library system of which Monash can feel proud.

6. UNIVERSITY FACILITIES

Computer Centre

The beginning of 1971 saw the successful conclusion of negotiations

with the Victorian Hospitals and Charities Commission and the Alfred Hospital which resulted in the installation of a second Burroughs B-5500 computer system in April. This led to a rise in the computing carried out from 11,500 hours of machine time in 1970 to a total of 14,500 in 1971. Of this the University used 11,300 hours to process approximately 285,000 jobs compared to 188,000 in 1970. The remainder of the time was used by the hospitals' computing service to process approximately 60,000 jobs. A number of research calculations requiring more substantial computing power than that available on the campus were sent to the CDC 6400 computer at the University of Adelaide where the equivalent of 1,000 hours of time on the University's computers was used.

The large rise in the number of jobs processed for the University alone was brought about only partly by the increase in computer time available. A new system for processing programmes that are written by undergraduates (MIDITRAN) was developed by the centre and used in 1971. It is more efficient than the system used in the past and accounted for 100,000 undergraduate jobs.

Expenditure for the year, excluding the hospitals' computing service, amounted to \$605,109 of which \$340,579 came from University recurrent funds and \$264,530 from revenue-earning activities. Revenue-earning work accounted for 12 per cent of the 11,300 hours of computer time used by the University.

In spite of the increase in the computer time available there was a decrease in the level of service provided by the computer centre. For the greater part of the year it was common for people requiring only a few minutes of computer time to have to wait for up to forty-eight hours and at times those requiring more than ten minutes waited several days. However, where the work was for the University administration and library and essential to their normal operation, a reasonable level of service was maintained.

It is clear that in spite of the frustration of the long delays in getting programmes run the demand for computing service is continuing to grow. Consequently a further deterioration in the standard of the service offered by the centre can be expected in 1972 as the funds available are unlikely to be able to cover the installation of additional equipment or the purchase of an adequate amount of computer time at the University of Melbourne or elsewhere.

Audio-Visual Aids

The Audio-Visual Aids section is a service unit of the University which exists to provide information and advice, and to investigate problems in the specific realm of educational technology, as well as the wider area of sound and visual requirements within the University complex.

Closed-circuit television activity showed an increase on 1970 with

more than seventy programmes produced during the year and the replay of video-taped material to students occupying approximately ninety-six days. Colour television was provided by the section for the first time at the Alfred Hospital. A large screen television projector produced an image 6 feet wide and 4½ feet high on a screen in the lecture theatre while a colour camera in the operating theatre and monochrome cameras on a panel of experts in another area transmitted their pictures to the projector. The sound system which was especially devised for the programme allowed viewers in the lecture theatre to question the surgeon or the panel of experts and hear an immediate reply.

Several television programmes were transferred to 16 mm. sound motion-picture film at commercial television stations. Such a transfer eliminates the need for special television equipment for the replay of programme material.

The production of 16 mm. sound motion-picture films was completed for the department of Obstetrics and Gynaecology and the faculty of Education and preliminary shooting begun for a film for the main library.

In addition to the technical service provided in the rotunda group of lecture theatres, the section's technical and operational responsibilities were extended to the Robert Blackwood Hall and technical assistance to the Alexander Theatre. Services included the projection of slide and motion-picture film, television replay, sound recording and replay, maintenance and design specification.

Religious Centre

The establishment of chaplains for 1971 included the Reverend P. Knowles, O.P., the Reverend Dr J. W. Whitehead and Mr Henry Shaw.

During 1971 religious services, discussion groups, study groups, committee meetings and inter-denominational activities have been continued and expanded. Those with weekly bookings during the semester included the Christian Science Organization, the Evangelical Union, the Student Christian Movement, the Newman Society, Lutheran Student Fellowship, the Yoga Group, Islamic Students' Society and Monash Jewish Students' Society.

1971 saw the continuation of a lecture series arranged for each Wednesday of first term in which visiting speakers of note lectured in the large chapel and conducted discussions in the narthex afterwards.

Sunday Nights at Monash, an up-to-date form of church service, was arranged by the SCM and held each month from April to August.

Recitals of music during the year culminated in the annual Christmas carol service.

There were several bookings by outside groups for services to be held during the year and a number of church groups included the religious centre in their itinerary.

The heavy demand for wedding bookings continues at a steadily increasing rate.

Student Counselling

1,319 students visited the counselling service in 1971, an increase of 10 per cent over the previous year. This represents approximately one in ten of the students enrolled in 1971.

The year saw a consolidation of the change, which became clearly evident in 1970, in the nature of the problems presented by our clientele. That is, the gradual shift from the study/vocational area to the personal/emotional or identity/developmental crisis area. In 1971 42 per cent of our clients were classified as experiencing identity and developmental crises and another 10 per cent as being psychologically disturbed. Just on 80 per cent of the total individual and group counselling hours was devoted to these clients. In 1971 15 per cent of our clientele presented the more specifically defined difficulty areas of study, vocational and finance. The averaging counselling hours per client in 1971 was 2.5 hours.

The counselling staff participated in a weekend live-in conference for second year Chemistry students which was run by the Chemistry department. The counsellors also took part in a special conference for first year Engineering students which was conducted by that faculty. It is hoped that these types of conferences will be held again in 1972.

Mr G. Cally, head counsellor, went away on study leave in August 1971 and is to visit USA and Europe and to study developments in the counselling field.

Robert Blackwood Hall

Stage two of Robert Blackwood Hall, the southern foyer, was completed in early June 1971.

The building was opened, officially, by Sir Robert Blackwood on Saturday, 19 June 1971 in the presence of the Visitor, His Excellency the Governor of Victoria, and many distinguished guests. Principal speakers at the ceremony were the Chancellor, Sir Douglas Menzies, the Vice-Chancellor, Dr J. A. L. Matheson, and Sir Robert Blackwood. A fanfare, processional music and a musical interlude were provided by the Australian Brass Choir.

The first public concert to be held in the hall was performed by the Melbourne Chorale on Sunday, 18 July. A large audience appreciated their first experience of the hall and hearing a memorable recital of sacred and secular music.

A number of student bodies used the hall for their various interests during the remainder of the year. These included two forums, a jazz concert and a blues concert.

The annual November examinations were held, in part, in the hall, its foyer, lobby, mezzanine floor, stage and sub-stage areas.

The first graduation ceremony in the hall was held on 9 December.

The general running of the hall in 1971 was placed in the hands of a Committee of Management, appointed by the Professorial Board for the purpose, under the chairmanship of Professor K. H. Hunt. He was succeeded in December 1971 by Professor R. W. Cumming.

A full-time manager for the hall was appointed in December 1971.

Careers and Appointments

Following the difficulties and disruptions of 1970, the year under review has been one of more constructive activity. Indeed, it seems likely that the publicity and discussion which arose from the student demonstrations against some of the work of the office have had the effect of building a much better understanding of its function and objectives amongst members of the University and others outside with whom contact is important.

The most noticeable feature of 1971 for the careers and appointments office has been the hardening of the employment situation which has affected graduates as well as other sections of the community. It is not yet clear whether this will result in any significant amount of graduate unemployment in the first half of the year, but the wide publicity given to the possibility of a shortage of jobs has resulted in a greater sense of urgency amongst graduating students.

Whilst the present relatively high rate of unemployment throughout the community may be a passing phenomenon, it seems certain that we are entering a period in which graduates will find greater competition for the jobs that have come to be regarded as suitable for them. What is needed, of course, is a reappraisal of the nature of employment that can be regarded as appropriate to graduates, then a conscious effort within the University and throughout the secondary education system to establish attitudes that are realistically attuned to the situation as it is. The careers and appointments office recognizes that it has a special responsibility in encouraging these attitudes, and another in influencing employers of all types to take account of the increasing incidence of tertiary education within the community in their policies for recruitment and training of young people.

During 1971 Mr Peter O'Brien, a careers counsellor, was seconded to the Cultural and Social Division of the Asian and South Pacific Area Commission, and will be with that organization in Seoul for three years. To help cover the period of his absence, the services of Mr John Peacock have been made available for one year. Also during the year Mr Milton Mackay, who had been research projects officer, resigned. Some rearrangement of duties has been made, and as a result Mr Lionel Parrott has been appointed from the beginning of 1972 to be an additional careers counsellor. It is believed that this staffing pattern is more appropriate to the hardening employment situation for graduates.

A major development during the year has been the launching of a weekly publication, *Careers Weekly*, to provide a channel of communication on matters concerned with graduate employment and listing of vacancies. So far, this has been directed primarily at graduating students, but it is envisaged that it will be developed during 1972 for distribution to employers as well.

An employer interview programme was held between May and September. The number of employer organizations invited was reduced somewhat because of accommodation difficulties, but nevertheless the programme was fully successful in its aim of providing graduating students with a source of information on individual organizations, the type of work that may be available from them, and the prospects that may arise in them.

The need amongst secondary school students for information on university education and the careers arising from it was again emphasized by the demands made on the services of the adviser to prospective students, Mr Richard Belshaw. It was not possible for him to visit all schools that would have welcomed his help, and the number of students wishing to see him for individual interviews was greater than one man could handle. The importance of this work lies in the extent to which bad or less than satisfactory educational or career decisions can be avoided, and there can be no doubt that much more remains to be done in this area.

The third survey of graduate starting salaries was published during 1971, and the interest in it amongst graduate students, employers and others confirms our belief in its usefulness.

Information on the first occupations of Monash graduates was again collected, and will be published in its final form quite soon. In 1972 this activity will be changed slightly so that similar information from all Australian universities can be collated and published jointly through the Graduate Careers Council of Australia.

Preliminary work has been done towards a survey of Monash graduates in physics. It is hoped that this will provide information about career development, job mobility, satisfaction with the course and with their subsequent careers and other matters of interest to the department of Physics and to the office. The survey should be completed by the middle of 1972.

Health Service

The year 1971 was the tenth year of operation of the Monash University health service, which began in 1962 with one part-time doctor in one small room with patients waiting in the corridor, and has expanded to three full-time doctors, four part-time psychiatrists, a sister, a secretary and a part-time receptionist, occupying over 1,800 square feet of floor space. There were 303 attendances in 1962 and over 20,000 in 1971. With the available staff and facilities this is very close to full

commitment. Indeed if the dean of Medicine had not allocated two extra rooms to the health service, following the move of the department of Botany early in 1971, we would have been in real difficulty.

The actual work carried out was similar to 1970 but the volume was much greater. Assistance with the thrice-yearly Sabin oral poliomyelitis vaccine administration and with the inoculation of fourth year Monash University medical students was continued. Two undesirable effects of the work load have been the lapse in our programme of emergency first-aid lectures and the relinquishing by two of the doctors of their out-patient assistant appointments at our associated teaching hospitals.

With the continuing demand for tertiary education it seems improbable that there will be any reduction in the number of students and staff seeking medical advice in the health service. The University administration is naturally concerned at the spiralling costs of providing this service and is seeking ways of alleviating the problem. There is a variety of possible solutions but this is a sensitive area and it is necessary to proceed with circumspection lest the essential character of the service be irretrievably damaged. The Vice-Chancellor intends in 1972 to investigate the future role of the health service.

Student Residence

Students are still experiencing housing difficulties, as the demand for all types of accommodation near to the University cannot be met.

The acute shortage of suitable private home accommodation in this area still exists; and the trend for local students to live in groups away from their own suburban homes is a serious drain on the already totally inadequate supply of flats and houses.

The rising cost of accommodation, together with that of transport, has created a further financial strain on those students who are thus forced to live in areas further away from the University than desirable.

Roberts Hall took its first thirty-two residents in the second term of 1971 when one wing of the building was completed. Another wing became available at the beginning of third term. The demand for places at that stage of the year was gratifyingly high. At the same time, nearly all casual vacancies in the North-East Halls were filled, with the result that 619 of a total of 627 student rooms on the site were occupied by the middle of the term. The number of applications received for 1972 suggests that it should be possible to fill all four halls at the beginning of the year. However a further fee rise of almost 17 per cent necessitated mainly by sharp increases in labour costs, will undoubtedly deter some students from accepting places. Unfortunately, the present state of the rural economy implies that country students, for whom the halls mainly cater, will be the most seriously affected.

Mannix College had a full enrolment of 225 male students at the beginning of 1971. Twenty-one resident tutors provided tutorial classes in all the main courses. A college library was inaugurated and a quali-

fied librarian employed. Apart from books of a general cultural and recreational character, it is intended to build up collections of medieval studies (with particular emphasis on Aquinas and Dante), general history of the Christian church, and Australian ecclesiastical history.

Marist College, constructed in 1969, was opened to male students at the beginning of 1970. It is planned gradually to increase the number of students in 1972 and later years.

Alexander Theatre

In 1971 the Alexander Theatre opened with a pantomime production of J. M. Barrie's *Peter Pan* by the Alexander Theatre Guild, the formation of which was recorded in last year's Report. This experiment was successful enough to be repeated in future years. The Guild also arranged a visit from the Ensemble Theatre in Sydney, staged its own production of *Othello* and co-operated with the Monash Players in a production of *Richard II*. This was the second major production by the Players, who had staged *Indians* by Arthur Kopit earlier in the year. The most notable visiting companies were *Le Tréteau de Paris*, under the auspices of the Elizabethan Theatre Trust, and the German Touring Opera Company from Berlin.

In spite of a full programme of plays, musicals, ballet, films, conferences and forums, meetings and public lectures, the income from hiring the theatre was less than in previous years, and with continual rises in costs it became clear that the committee would not be able to guarantee from its outside earnings the salary of the senior technician. However, it has been agreed that from 1972 this commitment is to be taken over by the University, which will now provide the salaries of manager and secretary and two technicians.

Improvements have been made to the sound system, to the lighting and to the workshop equipment. The hire agreement has been revised in the light of five years' experience, and certain principles have been agreed upon for incorporation in a new set of conditions for the employment of the technical staff. The theatre may be in operation from 9 a.m. until 11 p.m. on weekdays, and is often used for rehearsals at weekends. This has made heavy demands on the manager and his staff.

The theatre is now comparatively well equipped and, thanks to its professional staff and the part-time services of Mr Gordon Troup, its director, performs a useful service in the University. However, the committee is well aware that it has not yet succeeded either in attracting enough high quality productions from outside or in encouraging enough dramatic activity within the University to enable the theatre to make its full contribution to the cultural life of the University and the community. It is doubtful whether this can be achieved without a professional director. In the meantime, the committee is exploring various possibilities in conjunction with the Management Committee of the Robert Blackwood Hall.

Bookshop

The bookshop continued to expand its service to staff and students during 1971. With sales exceeding \$650,000 the bookshop has become one of the leading campus bookshops in Australia.

The bookshop has repaid a further \$20,000 of the advance made available by the University. However, the rates of increase in book prices and wages costs are proving a difficult problem and it is likely that the return from trading will decline in the immediate future.

The Bookshop Board has continued its policy of assisting MUMUS Co-operative Ltd. to obtain supplies to ensure that Monash medical students at the teaching hospitals are able to buy textbooks with a minimum of inconvenience.

The Bookshop Board is giving particular attention to ways in which merchandise, the range of stock, and service can be improved to meet the needs of the University community.

7. STUDENT ENROLMENT

The net total undergraduate population increased from 8,332 in the previous year to 8,627, an increase of 295 or 3.5 per cent. Graduate enrolments increased from 987 to 1,100 and total enrolment of all students from 10,384 to 11,034. Full details of enrolments are given in the table opposite.

Of these 11,034 students, 659 (6 per cent of the total) were from overseas, as follows: Borneo 11; Burma 5; Canada 6; Ceylon 5; Czechoslovakia 1; Egypt 3; Ethiopia 1; Fiji 22; France 2; Great Britain 14; Hong Kong 44; India 20; Indonesia 17; Israel 1; Japan 12; Kenya 1; Korea 1; Laos 2; Lebanon 1; Malawi 3; Malaysia 377; Nepal 1; New Guinea 5; New Zealand 11; Pakistan 3; Philippines 2; Rhodesia 1; Singapore 46; South Africa 3; Switzerland 2; Taiwan 2; Thailand 15; Tonga 1; U.S.A. 6; Vietnam 11; Yugoslavia 1.

8. STUDENT ACTIVITIES

Union usage and activity continued at a high level during 1971, with pressures being felt for more space and facilities. A new music listening section in the John Medley Library was extremely well patronized and provision was made for future off-campus recreational facilities at two sites—a 3-acre site at Lake Eppalock which it is hoped to develop in conjunction with the Melbourne University Sports Union, and an established camp/conference site set in 26 acres of bushland at Shoreham, which is being reopened as a joint project with the YMCA. During the year some discussions took place concerning the ultimate size of the Union and the building stages necessary to achieve that size.

As in previous years a Red Cross blood bank, Sabin oral vaccine,

GROSS ENROLMENTS 1971 (as at 30 April)

Faculty and Year	Full-time			Part-time			Total		
	M	F	T	M	F	T	M	F	T
HIGHER DEGREE									
Higher Doctorate	—	—	—	1	—	1	1	—	1
Ph.D.	280	38	318	63	15	78	343	53	396
Master	202	61	263	363	77	440	565	138	703
Total	482	99	581	427	92	519	909	191	1100
MASTER PRELIMINARY	20	16	36	72	46	118	92	62	154
BACHELOR DEGREE									
Arts									
I	248	526	774	158	173	331	406	699	1105
II	189	426	615	124	125	249	313	551	864
III	250	394	644	98	108	206	348	502	850
IV	72	60	132	—	—	—	72	60	132
Total	759	1406	2165	380	406	786	1139	1812	2951
Eco. and Pol.									
I	307	107	414	70	6	76	377	113	490
II	322	76	398	79	10	89	401	86	487
III	320	82	402	111	11	122	431	93	524
IV	47	6	53	10	2	12	57	8	65
Total	996	271	1267	270	29	299	1266	300	1566
Education	15	5	20	262	78	340	277	83	360
Engineering									
I	326	6	332	—	—	—	326	6	332
II	276	3	279	—	—	—	276	3	279
III	187	3	190	—	—	—	187	3	190
IV	140	2	142	—	—	—	140	2	142
Total	929	14	943	—	—	—	929	14	943
Law									
I	197	41	238	32	5	37	229	46	275
II	198	35	233	20	3	23	218	38	256
III	139	18	157	9	2	11	148	20	168
IV	89	19	108	6	2	8	95	21	116
V	121	12	133	12	2	14	133	14	147
Total	744	125	869	79	14	93	823	139	962
Medicine									
I	118	45	163	—	—	—	118	45	163
II	131	36	167	—	—	—	131	36	167
III	129	35	164	—	—	—	129	35	164
IV	118	24	142	—	—	—	118	24	142
V	113	23	136	—	—	—	113	23	136
VI	126	18	144	—	—	—	126	18	144
B.Med.Sc.	12	1	13	—	—	—	12	1	13
Total	747	182	929	—	—	—	747	182	929
Science									
I	338	189	527	12	8	20	350	197	547
II	297	144	441	31	12	43	328	156	484
III	239	118	357	38	10	48	277	128	405
IV	113	33	146	—	1	1	113	34	147
Total	987	484	1471	81	31	112	1068	515	1583
TOTAL	5177	2487	7664	1072	558	1630	6249	3045	9294
DIPLOMA—Education	142	215	357	162	125	287	304	340	644
NOT FOR DEGREE	7	2	9	101	39	140	108	41	149
GROSS TOTAL ENROLMENT	5828	2819	8647	1834	860	2694	7662	3679	11341
Less adjustment for students enrolled for more than one course	251	37	288	12	7	19	263	44	307
NET TOTAL ENROLMENT	5577	2782	8359	1822	853	2675	7399	3635	11034

book exchange and RACV Road Safety Week were popular adjuncts to Union activities. A flowers and handicrafts market held each Friday during third term provided additional colour to the Union scene. A ladies' hairdresser was added to the list of regular services available.

The Union Board concerned itself with a great number of items during the year. Among the more important of these was a review of the cleaning operations in the Union, plans for a gynaecological service to be established in 1972 and proposals for alterations to the composition of the Board.

In 1971 the number of student general meetings was smaller than in recent years, reflecting a somewhat less active body of students. However, large campaigns were organized around the Vietnam Moratorium and the visit of the South African rugby team.

The year also saw the election, for the first time, of two student representatives to Council, following a change in the University statutes in 1970.

Another feature was the large number of forums conducted throughout the year. Especially noteworthy were those of the Niugini Society and the Educational Affairs Committee of the Monash Association of Students which were very well attended and included members of parliament and interstate experts. In addition the Niugini Society presented a review of seminars on the problems of Papua-New Guinea development.

The Australian Union of Students sponsored Friendly Society health and medical benefits schemes which were well patronized by students at the University.

The Monash Association of Students conducted a two-school project in which one school in an affluent area was compared with another in a depressed area—both as to the facilities available and the attitudes of students. In a similar activity a Doveton Area Group was organized to help needy citizens.

The student newspaper *Lot's Wife* produced a record number of issues during the year.

A great number of social activities occurred, including a Computer Recovery Ball, for which students bought single tickets and were marked by computer on the basis of answers to a detailed questionnaire. In addition, the visiting entertainers, Peter Cook and Dudley Moore, drew a capacity audience in the Robert Blackwood Hall and were viewed by many others on closed-circuit television.

Club activity during the year included field trips, weekend conferences, intervarsities, reviews, cultural evenings, displays, guest speakers, forums, debates and numerous staff/student functions. There are currently ninety-eight non-sporting clubs affiliated with the Clubs and Societies Council.

Tuition courses were organized in a number of subjects which included different forms of dancing (ballroom, Indian, Malay, modern

and Scottish), photography, Italian, musical theatre, drama, choral, yoga, film appreciation, Hebrew, and Zen meditation. Approximately 2,000 students and staff enrolled in these courses. In most instances, the Clubs and Societies Council subsidized club tuition by up to 25 per cent.

Among the fine arts courses, pottery, as usual, proved to be the most popular, although weaving and spinning, weaving on four-shaft looms, life drawing and painting, jewellery, Sumi-e (Japanese painting) and sculpture all had their following.

The new music practice rooms were used for individual lessons and practice. Clubs also used them for tape or record sessions or group practice.

Crash courses in typing and efficient reading were very popular, as also was the course in first-aid.

Since its inception in 1969 the Monash summer school has become very well known throughout Victoria, and even interstate. Monash students were given preference before enrolments were opened to the general public, and the 1971 Monash summer school offered thirty-one courses. A total of 738 people participated, 40 per cent of whom were Monash students.

In February Maestro Alirio Diaz gave a five-day master class in classical guitar as part of the 1971 Monash summer school. Following auditions twenty-six people were chosen as participants and fifty-three people became "observers". Both participants and observers came from all over Australia, and 75 per cent were classical guitar teachers. The master class was enormously successful and gave great impetus to guitarists in Australia.

The inaugural National Conference of Vacation Schools Organizers was welcomed by Monash during May. Invitations were sent to some twenty organizations, both local and interstate, and a very successful three-day conference was held. Delegates came from all states and, during the round-table discussion, the various problems of running successful vacation schools were discussed with mutual benefit to all.

The Research Students Association started a thesis-typing service which has proved popular with honours and research students. A full-time office was opened in the Union and several small forums organized—e.g. one on Law and Order. The research students' magazine *The Researcher*, again expanded this year, and now has a circulation of nearly 1,200.

Monash teams continued their successful participation in Intervarsity sport, competing in thirty-three contests and being placed on twenty occasions with wins in the following sports:

basketball (women)	squash (women)
basketball (men)	squash (men)
lacrosse	table tennis (men)
rowing	volleyball (women)
skiing	

In regular club competition there was not only a further increase in participation at all levels but also an increase in the number of teams competing in "A" sections. During 1972 Monash will be represented in "A" grade in the following sports:

football
rugby
squash (men)
rowing
table tennis (men)

1971 also saw the introduction of some new clubs under the wing of the Sports and Recreation Association, namely: gliding, flying and croquet.

The title of the association was extended from Sports Association to Sports and Recreation Association to reflect more accurately the number of activities for which the organization is responsible. The grounds and other facilities of the association were all heavily used during the year. The seven squash courts were so heavily booked that a proposal to erect three more courts is to be implemented in 1972. The plans for the multi-purpose recreation hall were still unable to be finalized because insufficient funds were available for the purpose.

9. FINANCE

1. Funds Available

1.1 Recurrent Funds

Funds for expenditure on recurrent purposes during the year ended 31 December 1971 were available from the following sources:

	<i>Total</i>	<i>University</i>	<i>Teaching</i>	<i>Halls of</i>
	<i>\$000</i>	<i>\$000</i>	<i>Hospitals</i>	<i>Residence</i>
			<i>\$000</i>	<i>\$000</i>
State government grant	9,073	8,986	87	—
Academic fees	3,454	3,454	—	—
Commonwealth government grant	6,759	6,676	47	36
	<u>19,286</u>	<u>19,116</u>	<u>134</u>	<u>36</u>

The legislative sanction for the Commonwealth contribution is contained in the *States Grants (Universities) Act* (No. 2) 1971.

1.2 Capital Funds

Government funds available for expenditure on capital projects during the 1970-72 triennium are as follows:

Buildings, Equipment and Furniture:	\$000
On University site, other than halls of residence	9,861
Halls of residence	1,910
Affiliated colleges	83
Teaching hospitals	216
Capital equipment	160
	<u>12,230</u>

The legislative sanction of the Commonwealth portion of each of these amounts (i.e. one half) is contained in the *States Grants (Universities) Act 1969* as amended by the *States Grants (Universities) Act 1970*.

1.3 Research Funds

A special grant of \$930,000 has been allocated for the 1970–72 triennium for research and research training, this sum to be provided by the State and Commonwealth governments in equal proportions.

1.4 Students' Fees

A summary of the table of fees payable by students enrolled for the year 1971 is set out hereunder:

(a) Academic Fees

Undergraduate courses:	full-time \$480 per annum
Graduate courses:	
Master—	full-time \$168 per annum part-time \$84 per annum for first two years and \$20 per annum thereafter
Doctor of Philosophy—	full-time \$114 per annum
Higher Doctorate—	\$210

(b) Union Fees

Students studying on campus:	full-time \$54 per annum part-time varying amounts less than \$54 per annum
Students studying off campus:	full-time \$15 per annum part-time \$10 per annum

2. Accounts

The audited accounts of the University for the year 1971, which are appended to this Report, are preceded by a brief summary of income and expenditure of recurrent funds in 1971.

3. General

Costs generally, and particularly salaries and wages, continue to rise at an exceptionally high rate.

However, the AUC announced in August 1971 that the Commonwealth government would support supplementary grants for recurrent purposes of \$520,000 in 1971 and \$1,110,000 in 1972 subject to the State government providing its share in the usual ratio of \$1 Commonwealth to \$1.85 State. The State government met its share.

Despite these supplementary grants it is apparent that the University's staff/student ratio will deteriorate still further in 1972, the final year of the 1970-72 triennium. Compared with the AUC's target for 1972 of 1 : 11 the University has been unable to budget for a staff/student ratio better than 1 : 12.3.

No announcement has yet been made regarding funds for computing facilities for the 1970-72 triennium. The present computer service, which Council believes to be highly efficient and enterprising, still fails to meet the full needs of the University in teaching, research and administration.

10. GIFTS AND GRANTS

The following gifts and grants were received by the University:

The Leonard French window in Robert Blackwood Hall, valued at \$58,000, the gift of Sir Lindesay Clark, K.B.E.

On the recommendation of the Australian Research Grants Committee, the Commonwealth government approved grants for 1972 totalling \$589,490 as listed at the conclusion of this Report.

\$158,465 from the National Health and Medical Research Council as follows:

\$2,200 to Dr T. M. Adamson (Paediatrics): Lung liquid in the foetal lamb. Its composition at different gestational ages, its rate of formation, factors affecting its formation.

\$21,410 to Dr H. C. Burger (Medicine): Secretion and metabolism of human pituitary hormones.

\$700 to Dr B. G. Cragg (Physiology): Quantitative study by electron microscopy and structural changes in synapses occurring with use and disuse and in other experimental models of mental retardation.

\$3,900 to Mr G. P. Cross (Microbiology): Electron microscope studies on hepatitis-associated antigens.

\$4,825 to Professor S. Faine (Microbiology): Novel rapid microbiological methods.

\$6,264 to Professor S. Faine (Microbiology): Microbiological and immunological studies of pathogenesis and virulence in leptospirosis.

\$3,150 to Dr G. Fink (Anatomy): Studies on pituitary hormone releasing factors,

- \$11,545 to Professor B. G. Firkin (Medicine): (i) A study of platelet physiology; (ii) Mechanisms of anaemia.
- \$3,293 to Dr L. B. Geffen (Physiology): Immunological studies on the origin and fate of adrenergic synaptic vesicles.
- \$2,500 to Dr M. K. Gould (Biochemistry): Sugar transport in isolated skeletal muscle: Mechanism of insulin action.
- \$1,037 to Dr C. L. Gibbs (Physiology): Energy output associated with the development and maintenance of the active state of skeletal muscle.
- \$3,125 to Dr J. Hansky (Medicine): The radioimmunoassay of gastrin in blood and other biological fluids.
- \$13,015 to Professor M. E. Holman (Physiology): Biophysics of smooth muscle.
- \$10,260 to Professor B. Hudson (Medicine): The secretion and metabolism of androgens and oestrogens.
- \$4,500 to Dr F. T. McDermott (Surgery): The influence of the adrenal gland on cell division in acute renal failure.
- \$12,842 to Professor A. K. McIntyre (Physiology): Central actions of impulses from somatic receptors.
- \$2,542 to Drs R. F. Mark and J. L. Veall (Physiology): A new method in neurological assessment.
- \$500 to Dr H. K. Muller (Pathology): Effect of ultraviolet radiation on mouse skin.
- \$12,812 to Professor R. C. Nairn (Pathology): Pathogenic mechanisms in immunological diseases.
- \$10,850 to Professor R. Porter (Physiology): Central nervous mechanisms controlling limb movements.
- \$3,000 to Mr D. S. Rosengarten (Surgery): To study the prophylaxis and treatment of deep vein thrombosis after surgery and to study changes in coagulation in these patients.
- \$5,000 to Dr G. A. Ryan (Social and Preventive Medicine): Traffic injury and emergency medical services.
- \$3,000 to Dr J. B. St. John (Medicine): Study of the physiology and pathophysiology of the mucosa of the gastrointestinal tract.
- \$5,000 to Professor G. C. Schofield (Anatomy): Gastrointestinal exocrine secretions in intestinal motility.
- \$9,095 to Professor G. C. Schofield (Anatomy): Analysis of cell fluorescence.
- \$2,100 to Dr E. G. Westaway (Microbiology): Biochemical and immunochemical studies of arboviruses.
- \$49,800 from the William Buckland Foundation as follows:
- \$4,000 for the purchase of a spectrophotometer for the department of Paediatrics.
- \$18,000 for the purchase of an automatic gamma radiation counter for the department of Medicine at Prince Henry's Hospital.

\$3,986 for aids for the education of children with learning problems (Special Education unit of the faculty of Education).

\$15,739 for two foetal heart-rate monitor systems for the department of Obstetrics and Gynaecology.

\$4,500 for the purchase of a mobile laboratory for the department of Psychology.

\$3,575 for developing the library Southeast Asian collection.

\$34,508 from the National Heart Foundation as grants in aid:

\$20,546 (1970):

\$4,500 to Dr C. L. Gibbs (Physiology).

\$4,200 to Dr L. B. Geffen (Physiology).

\$5,596 to Dr L. Austin (Biochemistry).

\$6,250 to Dr K. J. Catt (Medicine).

\$13,962 (1971):

\$4,500 to Dr C. L. Gibbs (Physiology).

\$4,462 to Drs L. Austin and B. N. Preston (Biochemistry).

\$3,900 to Dr L. B. Geffen (Physiology).

\$1,100 to Dr B. Jarrot (Physiology).

\$33,198.85 from the Anti-Cancer Council of Victoria to support the following research projects in 1971, including 5 per cent (\$1,527.85) for administration and \$1,114 in salary adjustments:

\$3,920 to Dr M. Van der Weyden and Professor B. G. Firkin (Medicine): Investigation into enzymes involved in pyrimidine and purine pathways in red cells in acute adult leukemia.

\$10,546 to Dr H. Burger and colleagues (Medicine): Pituitary and gonadal hormones in malignant disease.

\$12,217 to Professor R. C. Nairn and colleagues (Pathology): Immunological aspects of cancer.

\$3,874 to Dr M. N. Cauchi (Pathology): Re-emergence of foetal antigens in Neoplasia and Dysplasia.

\$27,561 from the Australian Welding Research Association:

\$27,061 to the department of Materials Engineering to enable Associate Professor R. McPherson to extend his studies of stress relief treatments of welded alloy steels.

\$500 to Professor N. W. Murray (Civil Engineering) for research on the buckling of stiffened panels.

\$27,000 from Australian Advisory Committee for Research and Development in Education (Department of Education and Science), as follows:

\$15,000 to Mr J. C. Clift (Education) for research on micro-teaching technique, \$5,000 of which was to be available for 1971.

\$12,000 to Professor M. D. Neale (Special Education) for research on certain learning disabilities in otherwise capable children, \$5,000 of which was to be available for 1971.

\$23,635 from the Victorian Law Foundation as follows:

\$20,000 to the law library, as the first of three grants totalling \$60,000.

\$3,635 to Mr J. C. Lahore (Law) as part of a grant to assist research on copyright.

\$17,857 from the Rural Credits Development Fund of the Reserve Bank of Australia, for the following projects being undertaken in the department of Botany:

\$12,597 to provide a salary for a senior technical officer until June 1974 to work on an investigation into the fine structure of cereals and their pathogens.

\$5,260 for 1971-72 for project, "Grasses possessing extreme drought tolerance".

\$US15,000: Advice of an offer from the American Council of Learned Societies to match between 16 December 1971 and 1 January 1974 funds allocated by the University from its own resources for American Studies library purchases up to a maximum total of \$US15,000.

\$14,500 from the Commonwealth Advisory Committee on Advanced Education, as follows:

\$9,750 to Professors S. S. Dunn and P. J. Fensham (Education) to undertake a study of the academic success in tertiary institutions of students from the investigators' former "Tertiary Education Choice Study" which concerned 1967 school leavers.

\$4,750 to Professor P. W. Musgrave (Education) to investigate decision-making in relation to education and training in manufacturing and commercial undertakings.

\$13,000 from Applied Chemicals Pty. Ltd. as follows:

\$12,600 being \$2,650 stipend and \$500 grant in aid for each of four holders of Applied Chemicals scholarships for 1971.

\$400 to the department of Chemistry.

\$12,556 from the Nuffield Foundation as follows:

\$4,000 to Associate Professor J. P. Masterton (Pathology) for one year for the project, "Studies of sleep and arousal of patients acutely ill and in hospital".

\$4,000 to Dr I. D. Rae (Chemistry) for one year for the project, "The Chemistry of Cineole".

\$3,177 to Professor A. K. McIntyre (Physiology) to enable Professor A. J. Buller, University of Bristol, to visit Australia.

\$1,000 to Dr J. C. Saunders (Psychology) for one year for the project, "Auditory threshold detection in *Tachyglossus aculeatus* (echidna)".

\$379 to Professor B. O. West (Chemistry) for technical assistance on the project, "Perfluorosilyl and siliconyl derivatives of the elements".

\$US10,000 being \$5,000 for each of the years 1971 and 1972, from the Muscular Dystrophy Associations of America Inc. to Dr L. Austin (Biochemistry) to aid research.

\$10,000 from the Van Cleef Foundation to finance the fourth and final year of the Van Cleef Foundation Fellowship in Neurophysiology.

\$9,452.96 from the Australian Institute of Nuclear Science and Engineering as follows, including adjustments totalling \$571.96:

\$6,796 to finance a research fellowship.

\$3,085 in direct grants towards the following projects:

\$1,950 to Professor B. W. Holloway (Genetics): Radiation sensitivity and radiation repair mechanisms in *Pseudomonas aeruginosa* and its bacteriophages.

\$365 to Dr R. J. Fleming (Physics): Radiation effects in polymer studies at the electronic level.

\$500 to Mr. G. J. F. Troup (Physics): Magnetic structure of transition metal olivines.

\$8,000 from the Felton Bequests Committee:

\$3,000 to the department of Surgery for equipment to assist research into the diagnostic process.

\$3,000 to Professor B. S. Hetzel (Social and Preventive Medicine) to assist a study of the suicidal behaviour of women in Melbourne.

\$2,000 to assist work on "the radioimmunoassay of the secretin and cholecystokinin in biological fluids" being undertaken by Dr J. Hansky (Medicine).

\$7,808 from the Life Insurance Medical Research Fund of Australia and New Zealand as grants in aid awarded to Professor B. G. Firkin and Dr B. C. Ritchie (Medicine).

\$7,720 from the Commonwealth Department for the Environment, Aborigines and the Arts:

\$4,500 to enable Mrs Bobbie Hardie to continue research on Aborigines in the Darling River region for one year from 1 January 1971 under the supervision of Associate Professor I. Turner (History).

\$3,220 for the Aboriginal Studies Syllabus Project.

\$7,580 from the Monash University Parents Group as follows:

\$4,200 Special furnishings, Robert Blackwood Hall.

\$2,500 Books for library.

\$300 Special Education Fund.

\$200 Students Emergency Welfare Fund.

\$200 Child minding centre.

\$180 Union fine arts display cabinet (additional contribution).

\$6,947.02 from the Reserve Bank as follows:

\$5,000 for a research project on "Futures Trading" by Dr B. A. Goss (Economics).

\$1,250 towards the cost of a visit to Monash by Professor L. R. Klein (Economics), University of Pennsylvania.

\$697.02 being residual grant to support research by Mr P. D. Praetz (Economics).

\$6,000 from the government of Victoria to finance a graduate research scholarship in the field of Aboriginal health, for one year in the first instance.

\$6,000 from the Ministry of Aboriginal Affairs of Victoria, towards teaching salaries in the Van Leer pre-school project.

\$5,899 from the Australian Pre-School Association to support pre-school research by Dr Phyllis Scott (Education).

\$5,827 from the Myer Foundation as follows:

\$1,340 under the Asian and Pacific Fellowship Scheme to assist Mr John Ingleson (History), to study "The development of Indonesian nationalism between abortive communist uprisings of 1926-27, and the arrest of many nationalist leaders in 1933".

\$1,640 to assist Dr M. Kartomi (Music) undertake a study of Javanese music in Indonesia.

\$1,000 to subsidize the enrichment courses in Biology for secondary school teachers, being conducted by the department of Biochemistry.

\$897 under the Foundation's Asian and Pacific Fellowships and Grants-in-aid Scheme to Dr Lincoln Li (History) for his study of the Japanese Army in North China.

\$600 to assist Mr G. Cally (student counsellor) to undertake a study tour of the USA.

\$350 towards the provision of an annual travel scholarship to Japan for honours students in Japanese.

\$4,800 from the Commonwealth Department of Health Medical Research Endowment Fund to finance twelve Bachelor of Medical Science scholarships for 1972.

\$4,635 from the Australian Road Research Board:

\$4,275 being the first half of a total grant of \$8,550 for a project on steel box girders (Civil Engineering).

\$360 to provide research assistance for Dr G. A. Ryan (Social and Preventive Medicine) in an intensive study of car crashes.

\$4,500 from the Asthma Foundation for research by Dr H. Muller (Pathology).

\$4,200 from General Motors-Holden Pty. Ltd.:

\$3,800 to finance the GMH Postgraduate Research Fellowship.

\$400 to support the Master of Administration programme.

\$4,156 from Hoechst Australia Ltd. to support clinical trials with Streptokinase by Associate Professor K. H. McLean (Medicine).

\$4,133.50 from the Water Research Foundation of Australia on account of projects 68/142, 69/173 and 70/190.

\$4,000 from the Hospitals and Charities Commission for a research project to be carried out by Mr J. Deeble and Mr S. Lazarus (Economics).

\$4,000 from the Carlton and United Breweries Limited to the department of Biochemistry to support Professor A. W. Linnane's research project.

\$4,000 from Collier Charitable Trust to the University.

\$3,852.08 from N. V. Philips-Duphar, Holland, towards costs associated with clinical research trials on Ritodrine conducted by the department of Obstetrics and Gynaecology.

\$3,500 from Bayer Pharmaceutical Company to the department of Surgery for work involving the drug, Trasylol.

\$3,500 from the Percy Baxter Charitable Trust:

\$2,000 to enable full utilization of the kidney preservation machine (Surgery).

\$1,000 to Professor E. C. Wood (Obstetrics and Gynaecology) for the project, "The Human Egg".

\$500 towards the purchase of a Hewletts Packard 8-channel thermal recording system for research by Dr B. Ritchie (Medicine).

\$3,275 from G. D. Searle (Aust.) Pty. Ltd.:

\$2,975 to Associate Professor W. A. W. Walters (Obstetrics and Gynaecology) for cardiovascular research.

\$300 to Professor E. C. Wood (Obstetrics and Gynaecology) for research on Ovulen Incremental Pill.

\$3,240 from Merck, Sharp and Dohme (Aust.) Pty. Ltd.:

\$3,000 to support research on pituitary polypeptides by Professor J. Bornstein (Biochemistry).

\$240 to support the work of Dr D. St. C. Black (Chemistry).

\$3,100 from the Ian Potter Foundation:

\$2,000 for completing the Behaviour Environmental Laboratories (Zoology).

\$600 towards overseas travel expenses for Professor A. W. Linnane (Biochemistry).

\$500 for the Biology enrichment courses for secondary school teachers.

\$3,000 from the Australian Tobacco Research Foundation to support a project by Dr I. G. S. Alexander (Anatomy).

\$2,842 from the Australian Council for the Arts to the department of Music towards the cost of bringing an Indonesian musician to Monash in 1971 or 1972 to teach the performance of gamelan instruments to students.

\$2,600 from the Territory of Papua-New Guinea, as an extension of an earlier grant to Mr L. D. Mackay, faculty of Education, for his project, "An evaluation of some aspects of New Guinea science curricula".

\$2,600 from Australian Advisory Committee on Research and Development in Education to Dr F. J. Hunt (Education) to support his part in the project "Social Science Curriculum Development", being carried out in conjunction with several other universities.

\$2,480 from approximately 234 individual donors in support of the Australasian Medical Students Association Convention.

\$2,061.13 from anonymous donors:

\$1,500 to the Biophysics section (Surgery).

\$427.45 for necessary casual staffing (faculty of Arts).

\$100 for the department of Medicine.

\$20 for the Alexander Theatre.

\$13.68 for the department of Surgery.

\$2,000 from Esso Oil (Australia) towards the advancement of engineering research and studies.

\$2,000 from the Academy of the Social Sciences in Australia for the project, "Educational and Vocational Aspirations of Immigrants", by Professor R. Taft (Education).

\$2,000 from the Electrical Research Board for research by Mr W. J. Bonwick (Electrical Engineering) on a D.C. transmission link.

\$1,500 from the Estate of Garnet H. Carroll "for the provision of a bursary or other prize for the encouragement of artistry in the form of theatre known as musicals (excluding opera)".

\$1,500 from the Australian Royal College of Obstetricians and Gynaecologists (Fotheringham Trust A/c.) to Associate Professor W. A. W. Walters (Obstetrics and Gynaecology) for cardiovascular research.

\$1,500 from Monsanto Australia Ltd., being \$500 to each of the departments of Chemistry, Chemical Engineering and Materials Engineering.

\$1,429.50 being the first of four quarterly payments for 1971-72 from the Commonwealth Immigration Department to the department of Social and Preventive Medicine for work in the field of the health of migrants. The grant, at the rate of \$8,000 per annum, will continue for the life of the project, which is expected to be two or three years.

\$1,200 from the Italian-Australian Centre to finance the Casa d'Italia Scholarships for 1970 and 1971.

\$1,200 from the Family Planning Association to provide research and technical assistance to enable Mr H. A. Finlay (Law) to make a legislative survey in the field of family planning.

\$1,100 from the University of Sydney towards the expenses of the visits to Australia of Professor L. R. Klein, Benjamin Franklin Professor of Economics, University of Pennsylvania, and Professor A. Zellner, University of Chicago.

\$1,000 from the Patrick Brennan Trust to the faculty of Medicine. Of this sum the faculty executive allocated \$550 to the department of

Anatomy for an Amicon Ultrafiltration Cell 202, Reservoir RG3, Manifold MF2, membranes and magnetic stirrer, and \$450 to the department of Biochemistry towards the cost of a conductivity cell for membrane characterization.

\$950 from Roche Products Pty. Ltd.:

\$250 to the department of Surgery.

\$250 towards the travel expenses of Dr Graeme Oliver (Social and Preventive Medicine) in attending the meeting of the International Epidemiology Association in Yugoslavia.

\$250 towards the travel expenses of Dr R. F. Mark (Physiology) in attending the International Congress of Physiology in Munich.

\$200 to the department of Physiology towards the expenses of the Van Cleef Symposium on the Control of Movement, 1971.

\$750 from the University of Melbourne as a further subsidy towards the cost of publishing the *Australian Journal of French Studies*.

\$700 from the Forelanders Trust towards the cost of establishing the Monash Japanese Centre.

\$600 from Mrs D. J. Oliver to the department of Social and Preventive Medicine.

\$500 from Nicholas Pty. Ltd. to the overseas study being undertaken by Dr D. J. B. St. John (Medicine).

\$481.16 from the State Electricity Commission of Victoria towards the costs of the attendance of Dr W. D. Williams (Zoology) at the international symposium on man-made lakes, Tennessee, USA.

\$441.70 to the faculty of Economics and Politics, being balance of Reserve Bank grant transferred from the University of Adelaide to enable Mr P. D. Praetz to continue the project, "The Behaviour of Australian Share Prices".

\$400 from Australian Consolidated Industries to enable Dr Maurice Balson (Education) to attend a workshop conducted by the Praxis Corporation of New York while on study leave.

\$400 from the Shell Company of Australia Ltd. to finance the Shell Honours Year Scholarship for 1971.

\$400 from the Stock Exchange of Melbourne Ltd. as a contribution towards the 1971 Monash Economics Lecture.

\$400 from the Institute of Chartered Secretaries towards the costs of the annual Monash Economics Lecture.

\$350 from Western Mining Corporation Ltd. towards the provision of an annual travel scholarship to Japan for honours students in Japanese.

\$340 from Comalco Ltd. towards the cost of construction of an anechoic chamber for the department of Mechanical Engineering.

\$300 from A.P.M. Forests Pty. Ltd. to the department of Zoology.

\$300 from the William Angliss (Victoria) Charitable Fund for the benefit, objects and purposes of the Elwyn Morey Memorial Award.

\$300 from ICIANZ Ltd. towards the travel costs of honours students in Japanese visiting Japan for intensive instruction.

\$297 from the Spina Bifida Association towards the purchase of equipment for use by Professor R. Porter for his work on the control of movement by the brain and spinal cord.

\$260 from Mr D. Merkel (Special Learning Difficulties Association) to the Child Study Centre (Education).

\$250 from Gladesville Developments Pty. Ltd. towards the costs of the attendance of Dr W. D. Williams (Zoology) at the international symposium on man-made lakes, Tennessee, USA.

\$250 from the Alfred Hospital to the Monash department of Surgery towards expenses of attendance by Dr Murray Johns at the International Sleep Congress in Belgium in June 1971.

\$250 from Pfizer Pty. Ltd. towards the cost of Dr D. J. B. St. John's travel to the annual meeting of the Gastroenterological Association, Florida, 1971.

\$250 from Carlton and United Breweries to department of Biochemistry.

\$200 from Mrs Mary Potter (Obstetrics and Gynaecology) towards the work of the department.

\$200 from Fawns and McAllan Pty. Ltd. to help defray the travel expenses of Dr M. K. Gould (Biochemistry) in attending the Insulin Symposium in Jerusalem.

\$200 from the Australian Academy of Humanities to subsidize the publishing of the *Australian Journal of French Studies* for 1971-72.

\$200 from Mr and Mrs R. E. F. Smith to the department of Anthropology and Sociology for purchase of books.

\$200 from Parke Davis and Co. to the visiting lecturer fund (Medicine).

\$200 from CIBA-GEIGY Australia Ltd. to the visiting lecturer fund (Medicine).

\$200 from Beecham (Australia) Pty. Ltd. to the visiting lecturer fund (Medicine).

\$163.10 being donations to the Special Education Fund as follows:

\$83.10 Mrs Diane Vangelista's group.

\$50 Mr and Mrs M. Howard.

\$20 Mr Arthur Ristrom.

\$10 Professor J. B. Miller.

\$160 from W. D. Scott and Co. Pty. Ltd. for an annual prize of \$40 in Psychology II for years 1967-70.

\$152.50 from the Australian Institute of Nuclear Science and Engineering, as a contribution to the travel costs of members of the

department of Chemical Engineering who attended a conference at Lucas Heights in 1971.

\$130 from the Ames Company (\$50), Calbiochem (Aust.) Pty. Ltd. (\$50), and A. E. Stansen and Co. Pty. Ltd. (\$30) towards the travel expenses of Dr M. K. Gould in attending the Insulin Symposium in Jerusalem, 1971.

\$120 from the Geography Teachers' Association of Victoria to the Alexander Theatre.

\$100 from Monsanto (Aust.) Ltd. to the Careers and Appointments Office.

\$100 from Petroleum Refineries (Australia) Pty. Ltd. to the Careers and Appointments Office for 1970.

\$100 from the Van Cleef Foundation to the department of Physiology, towards expenses of the Van Cleef Symposium, May 1971.

\$100 from Fibremakers Ltd. to the Careers and Appointments Office.

\$100 from Altona Petrochemical Co. Ltd. to the Careers and Appointments Office.

\$100 from CSR Chemicals Ltd. to finance the CSR Chemicals Prize for 1971.

\$100 from Mobil Oil Australia Ltd. to the Careers and Appointments Office.

\$100 from M.I.M. Holdings Ltd. to the Careers and Appointments Office.

\$80 from Dr G. A. Holder (Chemical Engineering) to that department.

\$50 from Mr S. A. F. Pond to the law library.

\$50 from Fluor Australia Pty. Ltd. to the Careers and Appointments Office.

\$50 from the David Syme Charitable Trust towards the Elwyn Morey Memorial Award (Education).

\$50 from Mr M. F. Wissenden to the department of Medicine, Alfred Hospital.

\$40 from the Mathematical Association of Victoria for the Mathematics department library.

\$25 from Dr J. K. Fullagar to the Wilfred Fullagar Memorial Lecture Fund (Law).

\$20 from Miss S. K. McCallum to the law library (1970).

\$6.90 from Mr P. Crowcroft, Albury, towards the work of the department of Physiology.

\$5 from Mr W. K. Fullagar to the Wilfred Fullagar Memorial Lecture Fund.

\$5 from Mr N. F. Anderson to the Wilfred Fullagar Memorial Lecture Fund.

\$2.50 from Olivetti Australia Pty. Ltd. to general funds.

From the Beaumaris Branch of Melbourne Legacy a copy of the late Colonel W. S. Kent Hughes' epic poem, *Slaves of the Samurai*, for the University library.

In July 1967 two gifts of artefacts from the New Hebrides, one from Miss K. M. Alexander and her sister, Miss Alexander, of 9 Shakespeare Grove, Hawthorn, and the other from the Misses Leggatt of 4 Norris Street, Surrey Hills. The artefacts, known as the Reverend W. W. Alexander Collection and the Reverend T. Watt Leggatt Collection respectively, are on display in the department of Anthropology and Sociology Museum.

To the faculty of Medicine from Lady Dew, a collection of photographs of distinguished figures in the medical world belonging to the late Sir Harold Dew, the first professor of surgery in an Australian university.

From Mr Joseph Brown, a landscape by Arthur Boyd.

From the Trustees of the Peter Stuyvesant Trust a splendid volume, *Adventure in Art*, illustrating the Peter Stuyvesant group of companies international art collection.

From the Consul-General for the Federal Republic of Germany for the annual Goethe Prize in German for 1970, the works of Gottfried Benn in eight volumes.

From Riley Dodds Australia Ltd. to the faculty of Engineering, a scale model of stage 1 of the Darwin Power Station. (Value approx. \$1,000.)

Three automatic transmissions from the Ford Motor Company of Australia Ltd. to the department of Mechanical Engineering.

Information was received to the effect that the University was the residuary beneficiary in the estate of the late Harold James Cruikshank, formerly of 2 Cecil Place, South Melbourne.

From the Museum of Applied Arts and Sciences, Sydney, on indefinite loan, replicas of Laurence Hargrave's screw-propelled flying machine and double box-kite. The replicas are on display in the Hargrave Library.

In addition to the above gifts and grants, there have been many gifts of books, journals and other material, some very valuable, to the library and departmental libraries.

The appeal by the University for funds towards the building of Robert Blackwood Hall had reached a total of \$590,590 by 31 December 1971. The appeal by the churches and the Jewish community for the building of the Religious Centre had similarly reached \$233,391. A new appeal for the purchase of books for the library had reached \$11,268 and for the Development Fund \$10,203 by the same date.

The following research grants, recommended by the Australian Research Grants Committee, were approved by the Commonwealth government:

<i>Investigator</i>	<i>Title of Project</i>	<i>Amount</i> \$
HUMANITIES AND SOCIAL SCIENCES		
<i>New Projects</i>		
Dr B. E. Kennedy	A social history of Broken Hill, 1883 to the present	748
Mr B. A. Knox	The political life and colonial policy of the fourth Earl of Carnarvon, 1831-1890	1,000
Mr L. Li	The place of the military in the politics of modern Japan, 1868-1945	3,800
Professor M. I. Logan	Organizational change and inter-regional contacts	600
Professor C. Skinner	A critical edition of Ahmad Rijaluddin's <i>Ilikayat Perintah Negeri Benggala</i> (An account of the condition of Bengal)	3,167
Dr D. B. Waterson	The life and times of Sir Thomas McIlwraith	1,097
<i>Continuing Projects</i>		
Dr J. L. Bradshaw	Human information processing: determinants and correlates of performance	6,676
Dr C. S. Chen	A comparative study of the learning ability and memory of different strains of rats in a temporal maze	1,975
Dr M. G. Clyne	Migrant German and migrant Dutch in Australia	1,960
Dr D. E. Edgar	Socialization for conformity	1,788
Dr E. M. Eggleston	Aborigines and the administration of justice. A critical analysis of the application of the civil and criminal law to Aborigines (in Victoria, S.A. and W.A.)	3,150
Dr K. I. Forster	The perception of sentence structure under conditions of rapid visual presentation	2,676
Dr H. G. Geilber	Australia, the United States alliance and power relationships in the Pacific	5,311
Professor F. H. Gruen	Econometric analysis of protection	32,858
Dr T. Hore and Professor R. Taft	Teacher/pupil interaction with Australian and non-British immigrant children	4,218
Mrs E. Preston	A study of trade between Japan and Australia	4,870
Dr J. C. Saunders and Dr W. R. Webster	Single-unit activity in sensory systems of unanaesthetized animals	5,385
Dr A. G. Serle	History of Victoria, 1851-1900	1,940

<i>Investigator</i>	<i>Title of Project</i>	<i>Amount</i> \$
PHYSICAL SCIENCES		
<i>New Projects</i>		
Dr G. C. Fletcher	Theoretical investigation of electronic and particularly magnetic properties of transition metals and their alloys	7,276
Professor B. R. Morton	Dynamics of convective clouds	13,314
<i>Continuing Projects</i>		
Professor R. Street, Dr J. D. Cashion and Dr J. A. Barclay	Studies of solids at low temperatures in high magnetic fields	31,485
Mr G. J. F. Troup and Dr J. R. Pilbrow	Electron spin resonance, nuclear magnetic resonance and anti-ferro magnetic resonance in compounds and crystals	15,459
Dr R. Weber	Measurement of thermal properties of magnetically ordered materials in the temperature range 0.3 to 350°K in magnetic fields up to 60kg	7,281
CHEMICAL SCIENCES		
<i>New Projects</i>		
Dr F. W. Eastwood	Synthesis of potentially biologically active molecules	1,500
Dr J. E. Kent, Dr L. Dubicki and Professor R. D. Brown	Single crystal electronic spectroscopy of transition metal ions in polynuclear complexes	26,950
Professor B. O. West	Perfluorosilyl and siliconyl derivatives of the elements	4,669
<i>Continuing Projects</i>		
Dr D. St. C. Black	Metal template rearrangements	5,047
Professor R. D. Brown and Dr F. R. Burden	Molecular orbital studies of electronic structures of molecules The study of short-lived molecular species by microwave spectroscopy	25,000 15,436
Dr R. F. C. Brown	Pyrolysis and mass spectrometry of organic compounds	4,929
Dr G. B. Deacon	Synthesis and structure of organometallic compounds	7,186
Dr R. S. Dickson	Substituent effects in organometallic chemistry	500
Dr F. W. Eastwood and Dr I. D. Rae	Synthesis of sporidesmin	5,741

<i>Investigator</i>	<i>Title of Project</i>	<i>Amount</i> \$
Dr R. J. Fleming	The effects of ionizing radiation on some common organic polymer materials, studied at the electronic level	2,590
Dr B. M. Gatehouse	Crystal chemistry of the solid state	4,914
Dr I. R. McKinnon	The determination of the thermodynamic properties of simple fluids	1,248
Professor B. O. West	The reactions of cyclic arsines and phosphines	8,139
Dr I. R. Wilson	Quantitative studies of oxidation reactions	550
BIOLOGICAL SCIENCES		
<i>New Projects</i>		
Dr L. Austin and Dr P. L. Jeffrey	Synaptosomal protein synthesis	1,500
Dr W. R. Gibson	Endocrine factors which influence lipid deposition in chickens	2,109
Dr R. F. Mark	The function of regenerated synaptic connections in the nervous system	7,934
Dr G. A. M. Scott	A taxonomic investigation and revision of the mosses of temperate Australia	6,596
<i>Continuing Projects</i>		
Dr L. M. Aitkin	Central nervous mechanisms in sound localization	3,450
Dr L. Austin	The origin of axonal protein	8,080
Dr I. A. E. Bayly	Studies on osmotic and ionic regulation of animals in highly saline inland waters	800
Dr R. C. Bayly	Regulation of the enzymes of the "metamorphosis" pathway of <i>Pseudomonas</i>	4,221
Professor M. J. Canny	Physiological and structural studies of phloem	5,000
Dr D. J. Collins	Studies of the relation between stereochemistry and biological activity of oestrogens: synthesis of 6, 7-bisnor-1, 11-ethanoestradiol	6,547
Mr G. F. Cross	Mycoplasma-cell interaction	4,521
Dr L. B. Geffen and Dr B. Jarrott	Molecular basis of synaptic plasticity	10,044
Dr J. M. Haslam and Professor A. W. Linnane	The effects of altered biochemical composition on the structure and function of mitochondrial membranes	6,433
Professor B. W. Holloway and Dr V. Krishnapillai	Genetic control of enzyme regulation in <i>Pseudomonas aeruginosa</i>	11,708

<i>Investigator</i>	<i>Title of Project</i>	<i>Amount \$</i>
Professor D. G. Lampard and Dr S. J. Redman	Information processing in the nervous system using stochastic techniques	4,681
Professor A. W. Linnane and Associate Professor G. M. Kellerman	Effect of antibiotics on mammalian tissues and on human cells in tissue culture	6,547
Professor A. W. Linnane and Dr H. B. Lukins	Biogenesis of mitochondria	15,454
Professor D. A. Lowther and Dr H. C. Robinson	Structural studies of connective tissues including factors involved in the maintenance of cartilage	7,197
Dr I. R. McDonald	Adrenal function in the Australian monotremes and marsupials	7,681
Dr R. F. Mark	The mechanism of vision and memory in lower vertebrates	500
Professor R. C. Nairn and Professor E. P. G. Guli	Immunological studies of biological specificity	5,700
Dr T. P. O'Brien	Cell biology of grasses with special emphasis on cereals	26,807
Dr B. N. Preston	Physico-chemical and mechanical studies on model connective tissue systems	4,300
Dr R. A. Westerman	Communication between cells in the nervous system	4,345
Dr J. B. Youatt	Organic chemical aspects of cell differentiation	1,200
EARTH SCIENCES		
<i>New Projects</i>		
Nil		
<i>Continuing Projects</i>		
Dr A. C. McLaren	Direct observation and identification of crystal defects and their role in mechanisms of crystallization and deformation of minerals and rocks	59,800
ENGINEERING AND APPLIED SCIENCES		
<i>New Projects</i>		
Dr C. J. Bellamy and Mr L. G. Whitehouse	Research into compiler techniques for small computers aimed at a low cost computer system for teaching computer programming	34,723

<i>Investigator</i>	<i>Title of Project</i>	<i>Amount</i> \$
Dr P. Grundy and Professor N. W. Murray	Behaviour of structures under variable repeated load	9,585
Mr I. H. Lehrer	Mixing studies: (i) influence of various parameters (ii) investigation of the pro- perties of 2-phase jets	3,900
Professor K. Morsztyn	Modelling control and optimization of large dynamic power systems (power system simulator studies)	17,730
Professor O. E. Potter	Fluidized bed reactors—behaviour and design	4,237
<i>Continuing Projects</i>		
Dr J. B. Agnew	Dynamics of packed tubular reactors for exothermic chemical reactions	1,730
Dr G. A. Holder	Mechanism of crystal growth poisoning by polymers	600
Associate Professor R. McPherson	Ultra-fine dispersed phase ceramics pro- duced by precipitation from metastable solutions prepared by plasma methods	4,431
Dr W. H. Melbourne	Model scaling of wind effect on structures	4,969
Professor I. J. Polmear and Dr B. A. Parker	Studies of age hardening phenomena in alloys with special reference to the role of trace element additions	8,547
Dr C. Tiu and Dr D. V. Boger	Accelerating and decelerating flows of viscoelastic fluids in conduits of arbitrary cross section	3,450

For and on behalf of the Council,

D. I. MENZIES
Chancellor

ACCOUNTS FOR THE YEAR 1971

The audited accounts of the University for the year 1971 follow this introduction, in which the salient features are set out for ready reference.

1. *Capital Funds*

Since the incorporation of Monash University on 30 May 1958, the following funds have been provided for the acquisition of physical facilities of a permanent nature—

	\$000	%
State Government Grants	24,452	50.6
Commonwealth Government Grants	23,934	49.4
	<u>48,386</u>	<u>100.0</u>

These funds have been expended as follows:

	\$000	%
Land	480	1.0
Site Development	3,631	7.7
Buildings	39,108	82.6
Equipment	2,062	4.3
Furniture	2,094	4.4
	<u>47,375</u>	<u>100.0</u>

2. *Recurrent Funds*

A brief summary of the income and expenditure for recurrent purposes of the University for the year ended 31 December 1971 is given hereunder—

Income:

	\$000	%
State Government Grants	8,986	47.0
Commonwealth Government Grants	6,676	34.9
Academic Fees	3,454	18.1
	<u>19,116</u>	<u>100.0</u>

Expenditure:

	\$000	%
Teaching and Research	13,573	71.3
Libraries	1,548	8.2
Administration	2,158	11.3
Buildings and Grounds	1,348	7.1
Other	401	2.1
	<u>19,028</u>	<u>100.0</u>

The following accounts, which have been prepared in the form prescribed by the Auditor-General, provide further details of the year's activities.

MONASH UNIVERSITY
(1) STATEMENT SHOWING INCOME AND EXPENDITURE FOR ALL GENERAL PURPOSES
YEAR ENDED 31 DECEMBER 1971

	DIRECT GOVERNMENT GRANTS AND ACADEMIC FEES				INDIRECT GOVERNMENT GRANTS AND OTHER FUNDS				TOTAL
	Recurrent	Research Projects	Buildings, Equipment and Furniture	Recurrent (Teaching Hospitals)	Buildings, Equipment and Furniture (Hospitals)	Grants and Donations	Union Development	Other Items	
INCOME—									
State Grants:									
Received this year	8,986,152	210,000	1,229,430	87,300	5,487				10,518,369
Add Accrual at 31 December 1971					6,126				6,126
Deduct Accrual at 1 January 1971					8,613 Dr.				63,613 Dr.
Commonwealth Grants:									
Received this year	6,676,000	549,629	733,430	47,200	3,000				8,009,259
Add Accrual at 31 December 1971			474,930						474,930
Academic Fees	3,454,395								3,454,395
Union:								21,051	21,051
Fees								353,691	353,691
Other Income							135,798	22,232	22,232
Union Development Fees									135,798
Grants and Donations:									
Government-financed Bodies								527,793	527,793
Other								416,233	416,233
Appeals:									
Robert Blackwood Hall								75,421	75,421
Religious Centre								4,725	4,725
Other								15,545	15,545
Outside Earnings								563,660	563,660
Other Income								192,965	192,965
TOTAL INCOME	19,116,547	704,629	2,437,790	134,500	6,000		1,053,417	1,153,599	24,797,050

	DIRECT GOVERNMENT GRANTS AND ACADEMIC FEES					INDIRECT GOVERNMENT GRANTS AND OTHER FUNDS				TOTAL
	Recurrent	Research Projects	Buildings, Equipment and Furniture	Recurrent (Teaching Hospitals)	Buildings, Equipment and Furniture (Hospitals)	Grants and Donations	Union Development	Other Items		
	\$	\$	\$	\$	\$	\$	\$	\$	\$	
EXPENDITURE—										
<i>Teaching and Research:</i>										
Salaries	10,245,368	139,161		48,929		302,125		6,962	10,742,545	
Superannuation	776,938	3,310				7,264			787,512	
Departmental Maintenance	897,952	121,071		80,071		143,669		3,424	1,246,187	
Minor Equipment	218,826	310,841	96,002		2,747	72,853		53	701,322	
Major Equipment		3,098	295,530						298,628	
Research Scholarships and Fellowships	515,863	43,154				221,231			780,248	
Study Leave Grants and Overseas Travel	134,381	600							134,981	
New Appointments	95,778								95,778	
Other	687,643	25,809				70,827		4,563	788,842	
<i>Libraries:</i>										
Salaries	776,514								776,514	
Superannuation	47,824								47,824	
Books, Journals and Binding	659,388	33,094		5,500		7,705			705,687	
Equipment and Furniture	3,833					534			4,367	
Other	60,225								60,225	
<i>Administration:</i>										
Salaries	1,504,871								1,504,871	
Superannuation	109,910								109,910	
Postage, Telephone and Advertising	210,254								210,254	
Equipment	19,700								19,700	
Other	312,762								312,762	
Forward:	17,278,030	680,138	391,532	134,500	2,747	836,208		15,002	19,328,157	

(II) STATEMENT OF SOURCES AND APPLICATION OF FUNDS

	1958-69	1970	1971	Progressive Totals to 3/12/1971
SOURCES—				
(1) State Grants:				
Recurrent—				
General	\$ 35,129,735	\$ 8,320,107	\$ 8,986,152	\$ 52,435,994
Teaching Hospitals	217,317	83,400	87,300	388,017
Site, Buildings, Equipment and Furniture—				
General	20,036,038	1,275,000	1,229,430	22,540,468
Teaching Hospitals	1,890,098	18,502	3,000	1,911,600
Research Projects	698,311	155,000	155,000	1,008,311
Total State	57,971,499	9,852,009	10,460,882	78,284,390
(2) Commonwealth Grants:				
Recurrent—				
General	24,192,500	5,878,000	6,676,000	36,746,500
Teaching Hospitals	117,544	45,100	47,200	209,844
Site, Buildings, Equipment and Furniture—				
General	19,538,600	1,275,000	1,208,360	22,021,960
Teaching Hospitals	1,890,098	18,502	3,000	1,911,600
Research Projects	1,214,720	459,444	549,629	2,223,793
Total Commonwealth	46,953,462	7,676,046	8,484,189	63,113,697
(3) Total Government:	104,924,961	17,528,055	18,945,071	141,398,087
(4) Academic Fees and Fees for Special Short Courses	9,973,195	2,575,926	3,475,446	16,024,567
(4) Union:				
Fees	1,071,672	269,711	353,691	1,695,074
Other Income	60,114	22,232	22,232	104,937
(5) Grants and Donations, including Appeals	4,153,793	792,121	1,053,417	5,999,331
(6) Union Development	724,396	171,081	190,568	1,086,045
(7) Other Income	1,342,162	504,828	756,625	2,603,615
TOTAL FUNDS AVAILABLE	122,250,293	21,864,313	24,797,050	168,911,656

APPLICATION—	1958-59	1970	1971	Progressive Totals to 31/12/1971
	\$	\$	\$	\$
(1) Recurrent Purposes:				
General—				
Salaries and other operating expenses	59,681,059	16,041,273	18,065,603	93,787,935
Equipment and Furniture	5,583,040	441,047	300,799	6,324,886
Books, Journals and Binding	3,177,436	543,190	661,172	4,381,798
Teaching Hospitals—				
Salaries and other operating expenses	313,561	123,000	129,000	565,561
Books, Journals and Binding	21,300	5,500	5,500	32,300
(2) Site Acquisition and Development	3,575,463	290,172	245,716	4,111,351
(3) Building Funds:				
General—				
Buildings	31,901,535	2,366,685	1,380,829	35,649,049
Equipment	1,288,647	194,734	391,532	1,874,913
Furniture	1,644,339	151,568	155,769	1,951,676
Teaching Hospitals—				
Buildings	3,337,341	93,134	28,478	3,458,953
Equipment	159,666	25,740	2,747	188,153
Furniture	132,774	7,428	2,035	142,237
(4) Research Projects	1,866,940	545,012	680,138	3,092,090
(5) Grants and Donations, including Appeals:				
Salaries and other operating expenses	2,252,375	594,905	761,434	3,608,714
Equipment and Furniture	608,649	138,626	76,171	823,446
Books and Journals	40,821	9,817	7,683	58,321
Buildings and Site Development	392,447	358,261	94,559	845,267
(6) Union Development	976,386	337,524	85,264	1,399,174
(7) Other Expenditure	2,420,756	727,321	808,527	3,956,604
TOTAL FUNDS APPLIED	119,374,535	22,994,937	23,882,956	166,252,428

(III) STATEMENT OF BALANCES AT 31 DECEMBER 1971

Bank overdraft	\$	224,798	Cash on Hand and at Bank	\$	9,203
Students' Fees Received in Advance		148,045	Investments—		
Sundry Creditors and Accrued Expenses		1,157,168	Superannuation Funds:		
Loans on Mortgage		175,083	Semi-Government Securities, at lower of par or cost		78,891
Superannuation Funds		927,565	Fixed-Interest Securities, at lower of par or cost		384,692
Accumulated Funds—			Ordinary Shares, at cost (Market Value: \$333,360)		384,192
Direct Government Grants and Academic Fees:			Other Funds:		
Recurrent		670,314	Secured Deposits		2,700,000
Research		140,014	Fixed-Interest Securities, at lower of par or cost		354,498
Buildings, Equipment and Furniture—			Ordinary Shares, at cost (Market Value: \$221,372)		208,140
General		975,439			4,110,413
Teaching Hospitals		33,857	Sundry Debtors—		
Indirect Government Grants and Other Funds:			Accrued Government Grants		481,056
Grants and Donations		663,583	Other		317,566
Union Development		313,129			798,622
Other Items		489,150	Stocks on Hand		363,558
			Payments in Advance		10,091
					5,291,887
					<u>5,291,887</u>

(IV) TRUST FUNDS
STATEMENT OF INCOME AND EXPENDITURE FOR YEAR ENDED 31 DECEMBER 1971

<i>Income—</i>			
Income from Investments	.....		\$ 4,525
<i>Expenditure—</i>			
J. W. Dodds Memorial Scholarship	.....	400	
Vallejo Gannier Memorial Travel Fund	.....	500	
Oscar Mendelsohn Lecture	.....	348	
Monash University Rowing Club	.....	55	
The David B. Rosenthal Memorial Trust	.....	47	
Hume Turnbull Scholarship	.....	1,000	
William and Katherine Winter Foundation	.....	2,027	
		4,377	
Surplus for the Year	.....	148	

BALANCE SHEET AS AT 31 DECEMBER 1971

	\$		\$
Trust Funds—			
Balance, 1 January 1971	.....	80,181	
<i>Add:</i>			
Endowment Received	.....	500	
Surplus for Year	.....	148	
		80,829	
Balance, 31 December 1971	.....	80,829	
		80,829	
Cash at Bank	.....		2,974
Investments—			
Government Securities, at cost	.....		1,000
Semi-Government Securities, at lower of par or cost	.....		60,978
Fixed-Interest Securities, at lower of par or cost	.....		12,960
Ordinary Shares, at cost (Market Value: \$2,849)	.....		2,917
		77,855	
		80,829	

(V) STUDENTS' LOAN FUND
STATEMENT OF INCOME AND EXPENDITURE FOR YEAR ENDED 31 DECEMBER 1971

<i>Income—</i>		\$
Interest on Loans	1,032	
Interest on Fixed Deposit	3,135	
Bank Interest	154	
Donation	3	
	<u>4,324</u>	
<i>Expenditure—</i>		
Loan written off	252	
	<u>4,072</u>	
Surplus transferred to Students' Loan Fund		

BALANCE SHEET AS AT 31 DECEMBER 1971

Students' Loan Fund—		\$
Balance, 1 January 1971	116,380	
Surplus for Year	<u>4,072</u>	
Balance, 31 December 1971	120,452	
	<u>120,452</u>	
		\$
Cash at Bank	10,930	
Loans to Students—		
Long-term	48,102	
Short-term	5,063	
Accrued Interest	<u>1,357</u>	
Fixed Deposit	54,522	
	<u>55,000</u>	
	<u>120,452</u>	

CERTIFICATE BY MONASH UNIVERSITY

In our opinion the statements of account herewith, numbered (I) to (V), correctly record the transactions of Monash University for the year ended 31 December 1971.

17 July 1972

J. A. L. MATHESON
Vice-Chancellor

F. H. JOHNSON
Comptroller

AUDITOR-GENERAL'S CERTIFICATE

PURSUANT TO THE PROVISIONS OF SECTION 36 OF THE MONASH UNIVERSITY ACT 1958

The books and accounts of Monash University for the year ended 31 December 1971 have been audited by an officer acting under my direction. In my opinion, the statements of account herewith numbered (I) to (V) correctly summarize the financial transactions for the year.

19 July 1972

B. HAMILTON
Auditor-General