MONASH UNIVERSITY

Report of the Council

1967
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In accordance with section 41 of the Monash University Act 1958, I submit the annual report of the Council of the University for 1967.

1. THE COUNCIL

The Council held eleven meetings during the year, two of these being graduation ceremonies.

At the graduation ceremony on 25 May, which took place at the Melbourne Town Hall, the honorary degree of Doctor of Laws was conferred on Mabel Balcombe Brookes and Henry Edward Bolte, and the honorary degree of Doctor of Engineering on Willis Henry Conolly.

There were changes in the membership of Council during the year. Mr. J. H. Price who, as previously reported, had been a student observer at Council meetings by invitation in 1966, was elected by the students as their first representative at an election in June. The University was reminded of how much it owes to the voluntary service of Council members, when farewell was taken of two foundation members and one near-foundation member of the Interim Council. The Honourable P. V. Feltham resigned in June when he ceased to be a Parliamentary representative, and Mr. F. P. Johns relinquished his seat in July as representative of technical schools in the metropolitan area. In September, the Honourable J. F. Rossiter found the demands of his ministerial duties too great to allow him to continue in office as a Council member. These three vacancies were filled respectively by the Honourable S. R. McDonald, Mr. G. H. Thomas, and the Honourable R. W. Garrett. The following members were reappointed at the end of their respective periods of office: Professor D. Cochrane, Dr. I. D. Hiscock, Professor J. D. Legge, Dr. F. G. Lennox, Dr. T. E. Lowe, Mr. E. J. Tippett and Mr. J. W. Wood.

Sir Robert Blackwood and Sir Michael Chamberlin continued to serve as Chancellor and Deputy Chancellor respectively of the University and were reappointed for a further term of office commencing in March 1968.

The Council noted with pleasure, in the Queen’s Birthday Honours List, the creation of Mr. J. A. Forrest as a Knight Bachelor, and of
Dr. T. E. Lowe as a Commander of the Order of the British Empire. The award by the A.N.Z.A.A.S. to Miss Alice Hoy of the Mackie Medal was also noted with satisfaction.

2. DEVELOPMENT OF SITE AND BUILDINGS

The law school and circular lecture theatre block were both well on the way to completion and scheduled to be in use for the 1968 year. Construction of the Religious Centre commenced in March; it is due to be completed in April 1968. Work started on the second stage of the bio-medical library in November and completion is expected by the end of 1968. Stage 2 of the University Offices was started in November and the building is expected to be ready for occupation in August 1968. Planning is well in hand for science lecture theatres, science south building, science north building, stage 2 of the main library, education building, engineering heavy laboratories stage 4, the Great Hall and extensions to the Union. Actual construction of all these projects is scheduled for commencement during 1968. Site works, embracing extensions of the University’s road, water and electrical systems, continued. This included further development of the forum area and commencement of work on the master heating system.

3. ADMINISTRATIVE MATTERS

Legislation

Seven new statutes of the University and five amending statutes were made and came into force in 1967. Among the new statutes was 10.1 — Affiliation, a new and comprehensive statute governing the affiliation with the University of educational institutions such as residential colleges, hospitals, and research institutions. This statute was made in substitution for the previous statute 10.2 which only concerned the affiliation of colleges.

Statute 11.1.1 — Administration of Trust and Other Property was made principally for the purpose of giving the Council the power to make regulations for the administration and application of trust funds to be held in perpetuity for specified purposes. Regulations concerning three such trust funds were subsequently made. During the year, the Council also made forty-two new or amending regulations pursuant to the statutes.

University Publishing

The official publications — Calendar, Gazette, Guide for Prospective
Students, Faculty Handbooks, Introduction to Monash University were again issued during the year.

The University’s academic publishing programme continues to be developed by the Publications Committee. During the year assistance was offered to authors with the publishing of articles and books.

_The Northern Territory Pastoral Industry 1863-1910_ by Ross Duncan, formerly associate professor of History at Monash, was published in June. This was the first book to appear under the arrangement for joint publishing with Melbourne University Press. In August the Committee itself published a monograph by Dr. B. F. R. Pratt and Mrs. G. M. T. Silva which dealt with the use of computers for transcribing French text into phonetic symbols.

**Monash University Association**

Rules to govern the recently formed Monash University Association were made during the year. The aims of the Association are to—

(a) provide an opportunity for parents and others interested in Monash to identify themselves more closely with the University;
(b) encourage contact between representatives of the University, parents, staff, and members of the community generally for their mutual benefit;
(c) assist with projects associated with the University and help raise funds for specific University purposes;
(d) help students and parents cope better with problems arising from transition from school to university, and from university to employment.

**Open Day**

The University’s first Open Day was successfully held on Saturday 17 June.

**Victorian Universities Admissions Committee**

During 1967, the University, in collaboration with the University of Melbourne and La Trobe University, completed agreements for the establishment of the Victorian Universities Admissions Committee. Premises were obtained at 437 St. Kilda Road, in the same building in which the Victorian Universities and Schools Examinations Board is accommodated, and staff were appointed. The Committee undertook to co-ordinate offers of places in the three Victorian Universities to students for the 1968 academic year for the first time.

4. **STAFF APPOINTMENTS**

Although the high demand for teaching staff continues, staff recruitment was maintained at a satisfactory level during 1967. The
total of 568 full-time academic staff at 31 December 1967 shows a net increase of seventy on the figure for December 1966. The table on page 7 shows the staff by faculty and grade at 31 December 1967, the numbers in brackets indicating those who took up their appointments at Monash in 1967. The figures include a few short-term appointments.

Replacements of academic staff leaving Monash to take up other appointments continue to represent an increasing proportion of the total appointments made, and in 1967 for the first time the numbers of resignations exceeded the net increase in academic staff.

Academic staff who left Monash University during 1967 to take up other appointments were:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professors</td>
<td>1</td>
</tr>
<tr>
<td>Readers</td>
<td>1</td>
</tr>
<tr>
<td>Senior Lecturers</td>
<td>17</td>
</tr>
<tr>
<td>Lecturers</td>
<td>17</td>
</tr>
<tr>
<td>Senior Tutors</td>
<td>3</td>
</tr>
<tr>
<td>Senior Teaching Fellows</td>
<td>22</td>
</tr>
<tr>
<td>Teaching Fellows</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>81</strong></td>
</tr>
</tbody>
</table>

During 1967 professional library staff decreased by one to a total of forty.

Administrative staff of the grades of administrative assistant and above increased by one to a net total of 57 in the central administration, and in academic departments and ancillary services, administrative staff in similar grades increased by one to a total of twenty. The overall full-time staff of the University stood at 1,796 in December 1967 compared with 1,623 in December 1966.

Of the full-time academic staff who took up appointments during the year, ninety-six (of whom seventy-six had taken their first degree in Australia and twenty overseas) were recruited from Australia and fifty-five (of whom thirteen had taken their first degree in Australia and forty-two overseas) were recruited from overseas.

The following professors took up their appointments in 1967:

- I. P. Barko, L.Phil.L., (Brussels), D. de l'U. (Stras.) French
- E. M. Campbell, B.Ec., L.L.B. (Tas.), Ph.D. (Duke) (Sir Isaac Isaacs Chair of Law)
- A. C. Jackson, M.A. (Melb.), Ph.D. (Cantab.) (Second Chair of Philosophy)
R. Porter, B.Med.Sc. (Adel.), M.B., B.S., M.A. (Oxon.) (Second Chair of Physiology)
R. Zimek, Ph.D. (Prague) (Russian)
Professor Zimek's appointment is a short-term appointment.
The following professors who were appointed in 1967 will take up duty in 1968:
Professor M. G. Swift, B.Sc., Ph.D. (Lond.) (Anthropology and Sociology)
Professor S. Faine, B.Med.Sc., M.D., Ch.B. (N.Z.), D.Phil. (Oxon.) (Microbiology)
Professor J. McK. Watts, M.B., B.S. (Melb.), F.R.A.C.S. (Surgery)
Professor B. S. Hetzel, M.D., B.S. (Adel.), M.R.C.P., F.R.A.C.P. (Social and Preventive Medicine)
Professor A. A. C. Powell, B.Sc.Agr., Ph.D. (Syd.) (Econometrics)
Professor J. W. McCarty, B.Com. (Melb.), Ph.D. (Cantab.) (Economic History)
Mr. J. A. C. Mackie, B.A. (Melb.), M.A. (Oxon.) took up his appointment as research director of the Centre of Southeast Asian Studies.
Dr. A. Spry and Dr. I. D. Rae took up the research/senior research fellowships in 1967 which were referred to in the 1966 report. A total of twenty full-time research appointments were made in more junior grades.
The University records with regret the death of Professor A. J. Marshall, foundation professor of Zoology and Comparative Physiology, of Miss L. B. Smith on the secretarial staff in the faculty of Medicine, and Mr. C. A. Hosking and Mr. H. Donnellan, on the staff of the Central Administration.

<table>
<thead>
<tr>
<th>Arts</th>
<th>Economics and Politics</th>
<th>Education</th>
<th>Engineering</th>
<th>Law</th>
<th>Medicine</th>
<th>Science</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deans</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Professors</td>
<td>16 (3)</td>
<td>6</td>
<td>2 (1)</td>
<td>6 (1)</td>
<td>3 (1)</td>
<td>11 (1)</td>
<td>57 (8)</td>
</tr>
<tr>
<td>Readers</td>
<td>3 (1)</td>
<td>2</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>3</td>
<td>10 (1)</td>
</tr>
<tr>
<td>Associate Professors</td>
<td>5 (1)</td>
<td>---</td>
<td>1</td>
<td>---</td>
<td>1 (1)</td>
<td>5 (1)</td>
<td>13 (3)</td>
</tr>
<tr>
<td>Senior Lecturers</td>
<td>31 (10)</td>
<td>16</td>
<td>12 (4)</td>
<td>19 (2)</td>
<td>8 (2)</td>
<td>29 (3)</td>
<td>155 (29)</td>
</tr>
<tr>
<td>Lecturers</td>
<td>60 (13)</td>
<td>25 (7)</td>
<td>10 (5)</td>
<td>21 (5)</td>
<td>6 (1)</td>
<td>24 (4)</td>
<td>183 (41)</td>
</tr>
<tr>
<td>Senior Tutors</td>
<td>12 (4)</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>1</td>
<td>---</td>
<td>14 (4)</td>
</tr>
<tr>
<td>Senior Teaching Fellows</td>
<td>21 (6)</td>
<td>7 (3)</td>
<td>1 (1)</td>
<td>4</td>
<td>3 (3)</td>
<td>15 (12)</td>
<td>71 (30)</td>
</tr>
<tr>
<td>Teaching Fellows</td>
<td>23 (15)</td>
<td>22 (15)</td>
<td>---</td>
<td>---</td>
<td>2 (1)</td>
<td>4 (2)</td>
<td>58 (35)</td>
</tr>
<tr>
<td>Total</td>
<td>172 (53)</td>
<td>79 (25)</td>
<td>27 (11)</td>
<td>51 (8)</td>
<td>25 (9)</td>
<td>92 (23)</td>
<td>568 (151)</td>
</tr>
</tbody>
</table>
5. ACADEMIC DEVELOPMENT

The following degrees and diplomas were conferred by the University in 1967:

<table>
<thead>
<tr>
<th>Degree</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor of Arts</td>
<td>98</td>
<td>155</td>
<td>253</td>
</tr>
<tr>
<td>Bachelor of Arts with Honours</td>
<td>17</td>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td>Master of Arts</td>
<td>7</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Bachelor of Economics</td>
<td>76</td>
<td>8</td>
<td>84</td>
</tr>
<tr>
<td>Bachelor of Economics with Honours</td>
<td>8</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Bachelor of Education</td>
<td>3</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Bachelor of Engineering</td>
<td>17</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Bachelor of Engineering with Honours</td>
<td>18</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Master of Engineering Science</td>
<td>4</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Bachelor of Jurisprudence</td>
<td>31</td>
<td>3</td>
<td>34</td>
</tr>
<tr>
<td>Bachelor of Medical Science</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.B., B.S.</td>
<td>57</td>
<td>5</td>
<td>62</td>
</tr>
<tr>
<td>Bachelor of Science</td>
<td>25</td>
<td>11</td>
<td>36</td>
</tr>
<tr>
<td>Bachelor of Science with Honours</td>
<td>24</td>
<td>2</td>
<td>26</td>
</tr>
<tr>
<td>Master of Science</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Doctor of Philosophy</td>
<td>22</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td>Diploma in Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>412</td>
<td>195</td>
<td>607</td>
</tr>
<tr>
<td></td>
<td>84</td>
<td>78</td>
<td>162</td>
</tr>
</tbody>
</table>

A total of 6,457 candidates entered for the annual examinations in 1967—an increase of twenty-three per cent over the figure for 1966 and sixty-seven per cent over the figure for 1965. There were 20,223 subject entries, of which 17,084 (eighty-four per cent of the total), were passed, an increase of one per cent compared with the figure for 1966. The percentages in the three previous years were eighty-three per cent (1966), eighty-six per cent (1965), and seventy-four per cent (1964) respectively.

VICE-CHANCELLOR'S REPORT

In many ways the year 1967 can be regarded as one in which the University paused to take breath, so to speak, before taking another great leap forward. Certainly this is true so far as buildings are concerned for only two major buildings, law and the circular lecture theatre block—now to be known as the Rotunda—were under construction during the year. This is one of the results of the triennial financing system used in this country, for the grants for buildings for
1967-69 were only known towards the end of 1966.

The early months of 1967 were spent in designing these new buildings but it will not be possible to make a physical start, in most cases, until well into 1968. The two buildings mentioned above were the only two exceptions to this for, as "green-light" projects, they were given approval at an earlier stage so as to ease the effect of the triennial system.

This slackening of the building programme has resulted in great pressure on accommodation and most of the deans' reports which follow reveal the concern which the growing congestion is creating. Unfortunately it is unlikely that any relief will be felt until 1969, and not then in all areas.

1967 was also the year in which the estimates for the 1970-72 triennium had to be prepared and this work proved to be much more arduous than in former years. The Australian Universities Commission had prepared a complicated series of forms which universities were required to complete. These recorded past experience and future expectations in such detail that our submission eventually comprised four foolscap volumes each an inch thick. It cannot be denied that institutions which expect to receive large sums of public money must be prepared to support their requests with full explanations. But many believe that more meaningful submissions could be prepared with much less effort by an intelligent re-design of the system, and the Australian Vice-Chancellors' Committee, of which I happen to be the current chairman, is hopeful of being able to persuade the A.U.C. to reconsider its approach to this question.

The preparation of the submission started from a decision that our undergraduate population should not exceed 12,000 and that the proportion of those students studying laboratory subjects should be increased from the present figure to nearly forty per cent. Of the remainder some 50 per cent would be in Arts, Economics and Politics, and Law while about ten per cent would be in Education. Study of these figures revealed that in only two faculties, Engineering and Science, could significantly larger numbers of first year students be admitted than at present. This fact, which means that until a fourth university opens its doors La Trobe University must cater for any increase in the number of school-children entering Victorian universities, was conveyed to the State Government and to the AUC in August. In the meantime the number of students wishing to enter a university but not able to do so continues to grow.

Statistical analyses, however, although essential for physical planning reveal nothing of the real life of the university whose growth they record. The characteristic quality of life at Monash is, I believe, its vigour and vitality which make it an extraordinarily interesting—if occasionally uncomfortable—institution in which to work. The deans' reports reveal something of the intellectual vigour of the place which
is rapidly acquiring quite a creditable reputation for scholarship. The movement of some of our professors to notable positions abroad is an indication, regrettable in one sense, of the calibre of our senior staff.

The energy of our students is by no means exhausted by their academic labours, and their non-curricular life, as seen in the Union for instance, is correspondingly very active. The broad policy of the Union is laid down by the Union Board, on which students are soon to have a majority, but the three main components of the Union—the Clubs and Societies Council, the Students' Representative Council, and the Sports Association—are responsible for day-to-day activity and this is astonishing in its variety. Some details of all this are given elsewhere (p. 44) but I wish now to refer to some incidents which have brought Monash into the public eye in a less than favourable way. The light-hearted pranks of Farm Week were followed closely by the incidents in which students demonstrated their opposition to the war in Vietnam.

Students everywhere have traditionally—and rightly—taken a great interest in politics and from time to time have exerted a strong influence on affairs by demonstrations and other manifestations of concern. At the present time student disillusionment with our world is to be seen in many countries and, no doubt, is spreading to Australia. If all this leads to improvement and reform when the angry young men of today reach positions of responsibility and influence, then so much the better; but let us take care that the universities, which in many countries are the only places where independent thought is encouraged, or even permitted at all, are not irreparably damaged in the process. For this reason I always urge members of the University, who are entitled to the same rights of expression as any other citizens, to try to isolate the University from their individual political involvement.

Finally I wish to refer briefly to the relations of Monash to our sister Universities, La Trobe and Melbourne. The Victorian Universities and Schools Examinations Board, which comprises representatives of the universities, the schools and the Department of Education and which now controls the leaving and matriculation examinations, has been running successfully for some years. Although there are some dangers in having a single examinations authority, in that educational progress could be retarded, the work of the various curriculum revision committees suggests that care is being taken to avoid this particular risk. On the other hand there are manifest advantages to schools and students in having but a single set of regulations to comply with.

The Victorian Universities Admissions Committee will, in early 1968, provide a mechanism which should greatly assist the universities to select their students from the larger number of candidates seeking admission.

In conclusion, mention should be made of the Victorian Universities Committee which provides a regular forum for discussion of problems
of mutual interest by senior members of the three universities and of the Victoria Institute of Colleges.

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

The number of first year Arts students has now been stabilized at 1,100. In 1967 about 850 of these were new students. The remainder were re-enrolling students who had not yet passed the three subjects needed to qualify for admission to second year. Undergraduate enrolments rose from 2,297 to 2,525. The number qualifying at the end of 1967 to graduate at pass level rose from 250 to 362, and at honours level from twenty-five to thirty-one. From the marked increases in the numbers of honours students in second and third years a higher proportion of degrees may be expected to be completed at honours level in the near future. Graduate enrolments rose from 109 to 154.

The staff establishment was increased by 20 to 186, and most of the new positions were filled by the beginning of the year. In August, Professor R. M. Laufer, who had held the first chair of French since 1962, resigned to take up the chair of French and Comparative Literature at the University of Aix-Marseille. His place has been taken by Dr. I. P. Barko, formerly reader in French in the University of Melbourne. Neither the second chair of French nor the chair of Russian has yet been filled, but Dr. R. Zimek, head of the department of Slavonic Studies in the University of Olomuc, took up the position of visiting professor of Russian for a period of fifteen months in October. Dr. M. G. Swift, formerly of the University of Sydney, has been appointed to the second chair in the department of Anthropology and Sociology. Mr. J. A. C. Mackie, formerly reader and head of the department of Indonesian Studies in the University of Melbourne, has been appointed as reader and director of the Centre of Southeast Asian Studies. Miss M. M. Morgan has been promoted to a readership in English, and Dr. W. Kirsop and Dr. W. M. Rivers to associate professorships in French.

The study of Japanese, a language offered for the first time in 1967, has been encouraged by undergraduate scholarships provided by Repco Ltd., I.C.I. and the Forelanders Trust, and the Myer Emporium Ltd. has provided funds to enable a research scholar to be brought from Japan. Music, Spanish, Greek and ancient history were extended to second year, Latin and linguistics to third year, and fourth year honours courses were offered for the first time in Russian.

Apart from regular degree courses, intensive courses have been offered during the vacations in Indonesian and in Japanese, and most departments concerned with the teaching of subjects taught in schools have run special courses or “schools nights” for teachers and pupils in secondary schools.
There have been numerous academic visitors during the year, both from other Australian universities and from overseas. Most of them have conducted seminars for staff and senior students and also given public lectures to wider audiences. These have been well attended.

In preparing its submissions to the AUC for the 1970-72 triennium, the faculty board has given considerable thought to future development. Now that undergraduate numbers are approaching their maximum it is unlikely that there will be more than two or three new departments in the foreseeable future. There will no doubt be changes of emphasis and there may be developments in interdisciplinary studies, but the main growth is likely to be at the postgraduate level, especially if departments continue to attract graduates from other universities and if the present trend in the growth of honours schools is maintained.

The publications of individual members of staff are listed elsewhere. The *Journal of French Studies* has now reached its fourth volume and is well supported by donations from outside the University. The department of Classical Studies continues to publish its journal for ancient philosophy and science, *Apeiron*, which has attracted a number of contributions from overseas scholars. *Komos*, a new quarterly journal of drama and the arts of the theatre, under the editorship of Miss M. M. Morgan assisted by other members of the English department, began publication in March.

Research on an interdepartmental basis has been fostered by the Centre of Southeast Asian Studies and the Centre for Research into Aboriginal Affairs, and a research seminar in linguistics has been held weekly throughout the year. Work on information retrieval in language and literature, in conjunction with the computer centre, has been carried out for the departments of English and Classical Studies and some sections of the Modern Languages department with the assistance of Mrs. G. Silva, who has also supervised the application of similar techniques to aboriginal songs for the ethnomusicological research laboratory.

Other new developments worthy of note are the establishment by Mr. J. A. Peterson, lecturer in geography, of a recording station at Mt. Buller for research into the periglacial climates of south-eastern Australia, and the inauguration of a philosophy summer school in conjunction with the Council of Adult Education.

Finally, the Alexander Theatre, opened at the beginning of the year, has been especially valuable for the work of the faculty. Besides providing a much needed large lecture theatre, it has enabled the lunch-hour concerts arranged by the department of Music to be heard by far larger audiences and has encouraged a high standard of dramatic production among staff and students. It has also attracted visiting groups, professional and amateur, to give performances which would not otherwise have taken place within the University.
Faculty of Economics and Politics—Dean: Professor D. Cochrane, B.Com. (Melb.), Ph.D. (Cantab.)

The number of first year students in 1967 was 520 compared with 470 in 1966. It is hoped that this large number of first year students can be held stable in future years. The total enrolment of students taking the economics degree numbered some 1,200 in 1967 compared with 920 in 1966. This was a substantial increase and despite the stability of first year numbers in future years it is expected that total enrolments will go on increasing for several years. In addition to the students mentioned, the faculty also taught substantial numbers of Arts and law students.

While the faculty has always been interested in providing courses which meet the needs and abilities of both mathematically and non-mathematically inclined students, special mention has been paid at Monash to the field of quantitative economics. This has been a hitherto relatively neglected area of study in Australia.

This decision has borne fruit. The number of students taking mathematics in the first year of the undergraduate degree rose sharply in 1967. Furthermore these students performed very well indeed. In addition there was a rise in the number of students taking economic statistics in the second and third years of the undergraduate degree. Prospects for further development in these areas seem bright, but as with all problems of growth there are difficulties and in this case there is the obvious one of finding a sufficient number of good staff to provide adequate teaching.

The faculty of Economics and Politics at Monash now has the largest intake of first year full-time undergraduates of any economics faculty in Australia and from this intake this faculty is producing more graduates with an intensive training in quantitative economics than any other university faculty. Our development in this field will of course be assisted by the appointment of Professor A. A. L. Powell to the chair of Econometrics in 1967.

The appointment of Professor J. W. McCarty to the chair of Economic History will also strengthen the teaching and research in another large and growing area of activity.

Early in 1967 eighty-four graduands received their degrees in economics. These were the output of the year 1966. The output of 1967 jumped to 140 and it is expected that these students will graduate early in 1968.

While several new units in both economics and politics were introduced into the undergraduate degree in 1967 the real academic thrust of the faculty took place at the graduate level. The Master of Economics degree by course work was implemented in 1967 and twelve students set out along this route for a higher degree. The number of students undertaking Masters’ and Ph.D. degrees by thesis expanded
to twenty-seven, of whom sixteen were in economics and eleven in politics.

Owing to the high level of outside demand for economics graduates it has been difficult to encourage students to undertake graduate work. The achievements in 1967 were accordingly very heartening. In this connection it might be mentioned that the first candidate to complete a Master's degree in economics, Mr. Tran Van Hoa, submitted his thesis in 1967. It was approved by his examiners—the title being "Consumer Demand and Sensitivity Analysis: A Study in the Theory of Directly Additive Preferences".

Details of the Master of Administration degree were finalized in 1967 and candidates were invited to apply in that year for entry in 1968. The response was somewhat overwhelming, and it is encouraging to see that a high proportion of the applicants possessed science and engineering degrees—many of these at honours standard.

During the year several members of the department of Economics conducted a special series of lectures on "Economics for Business" for members of the staff of Felt and Textiles Ltd. Five sessions were conducted at Monash and were repeated in Sydney. This series seems to have been well received as requests have been made for another performance in 1968. In addition, a series of lectures on "Statistics for Accounting" was organized in conjunction with the Chartered Institute of Accountants for presentation in 1968.

The faculty was fortunate in again having a large number of distinguished visitors. In particular, Professor Joan Robinson from the University of Cambridge and Professor Hiro Uzawa from the University of Chicago each spent some five to six weeks with the department of Economics. Professor Robinson gave several public lectures. Professor Eli Kedourie from the London School of Economics spent a month with the department of Politics and gave a series of public lectures on "The Nature and Growth of Nationalism in Africa and Asia". Twenty-two visitors contributed papers to staff seminars.

During the year Professors F. H. Gruen and J. W. Bennett took study leave. Professor Bennett took up a visiting professorship at Cornell University for one term. In addition, Professor J. E. Isaac was invited to the University of Pittsburgh for three months during January to April as visiting professor of Economics.

Faculty of Education—Dean: Professor R. Selby Smith, M.A. (Oxon.), M.A.T. (Harv.), F.A.C.E.

The faculty has continued to develop quickly: enrolments last year rose so that there were 282 full-time and eighty-four part-time candidates for the Diploma, two full-time and 105 part-time for the Bachelor's degree, and fifteen for the Master's degree. The first three candi-
dates for the Ph.D. were also admitted. It is satisfactory that it has been possible to make a significant beginning with work for higher degrees so early in the life of the faculty. The first two Bachelor's degrees to be awarded in the faculty were conferred at the ceremony which was held in the Melbourne Town Hall in May.

Numbers are not likely to rise to quite the same extent this year. For this reason, and also because financial limitations have compelled the University to accept a less favourable staffing ratio in all faculties, only five additional academic appointments have been made during the year. The number and quality of the applicants, however, has remained very satisfactory. The State Education Department has again offered very generous co-operation in the work of the faculty, and especially in connection with the study of the methods of teaching the various school subjects.

Dr. P. J. Fensham, appointed in 1966, took up duty in September. The decision of the Council to name his chair after Sir Ian Clunies Ross has not only given a great deal of pleasure to Sir Ian's many friends and admirers, but has been generally received as a most appropriate tribute to Sir Ian's distinction as a leader of scientists and to his enthusiasm for the improvement of their education. A fourth chair was advertised early in 1967 but was not filled during the year. An offer was made and accepted in February 1968.

Steady progress has been made with the planning of the new building for the faculty, and it now seems likely that it will be possible to call for tenders this autumn, and to hope that the building will be ready for occupation during the middle of 1969. The growth of staff numbers has made it very difficult to accommodate everyone satisfactorily; we are very grateful to various departments in the faculty of Arts who, by making staff offices and tutorial rooms available to us, have enabled us to manage without too much difficulty.

Research activities have been expanding rapidly. Professors Dunn and Fensham have received grants from the Commonwealth Advisory Committee on Advanced Education to undertake research on student selection of courses in senior technical colleges, and on the relationship of training to the demand of the job and future prospects of employment.

Research grants from the Department of Education of the Territory of Papua and New Guinea have been awarded to Mr. L. D. Mackay for a project entitled "An evaluation of some aspects of New Guinea science curricula"; to Miss M. Nixon to enable her to carry out a study of concepts related to word meaning (English language) with indigenous children and to Dr. J. F. Cleverley for a study of problem areas in the teaching of social studies in native primary schools. The Australian Research Grants Committee have also continued their support of Mr. Mackay's project for the evaluation of Physics curricula in secondary schools by granting $4,500 for next year.
Dr. F. J. Hunt and Mr. G. L. Johnston have received a grant from the Myer Foundation for work on social studies curriculum materials and the faculty will be involved in the Aboriginal Pre-School Project for which funds have been granted to the Centre for Research into Aboriginal Affairs by the Van Leer Foundation. In September, the faculty accepted a major responsibility in organizing a research seminar for the Centre for Research into Aboriginal Affairs on “Education for Aborigines”.

Professor Dunn was invited to attend the International Workshop on “The Possibility and Limitations of Educational Testing” which was held in Berlin in May 1967 and delivered three papers. On his way he visited Israel, Sweden, England, U.S.A., and Canada. Professor Selby Smith commences study leave in late December and will spend most of 1968 in Great Britain working at the Institutes of Education in the Universities of London, Bristol and Exeter.

The other projects mentioned in last year’s report have been continued. Publications by staff during the year are set out in the attached list.

The number of subjects which is to be offered in 1968 to candidates for the Bachelor’s degree has been further increased by the provision of a second subject in the philosophy of education called “Philosophies of Teaching Subjects”, by a course on remedial education, and one on organizational psychology. The latter is intended as an introduction to the study of administration. These new subjects have been introduced in an attempt to make it possible for candidates for the Bachelor’s degree to study in somewhat greater depth than has hitherto been possible. It is hoped that those candidates who choose their subjects with this in mind will be enabled to lay a firm base for further studies leading to a higher degree if they so desire.


Undergraduate enrolments continued to rise, the total in 1967 being 502 (as against 380 for 1966). The number in first year in 1967 was 190 (an increase of twenty-nine over 1966). As exemplified by the numbers completing their courses, there is a greater demand for civil engineering than for the others; students graduating at the end of 1967 being chemical 15 (10), civil 21 (12), electrical 15 (7), mechanical 9 (7), (numbers in brackets being the 1966 figures). Of the total of 59 graduating, thirty-nine qualified for honours (six 1st class, eighteen 2nd class, fifteen 3rd class). The faculty believes that a reasonable basis of assessment of honours gradings has been established to ensure consistency between one year and another, and between the courses. The number of students admitted into third year with diplomas from
Victorian technical colleges increased (22 as against 16 for 1966), the main pressure here being for courses in electrical engineering, because the University of Melbourne temporarily restricted the diploma entries in this field. The performance of these third year entry diploma men has been good.

The number of candidates enrolled for higher degrees rose from sixty-five in 1966 to seventy-two in 1967. Of these twelve were members of staff. Four Ph.D. degrees were conferred on members of staff, namely, Dr. J. B. Agnew, Dr. R. K. Keenan, Dr. S. J. Redman and Dr. G. I. N. Rozvany.

Apart from these, four M.Eng.Sc. degrees were conferred. The research activities in the faculty continue to expand to the extent that the problem of adequately accommodating research scholars is becoming quite serious.

The academic staff actually on strength in the faculty rose from forty-five in December 1966, to fifty-three in December 1967. This still leaves five vacancies on establishment which represents the expected limit of new appointments that can be made at the present time. Six members of the academic staff were absent on study leave during 1967. Dr. J. B. Agnew went to the British Petroleum Refinery at Belfast to assist in a project of conversion to digital computer techniques for refinery control. Dr. S. J. Redman was awarded a Nuffield Fellowship and left in May to spend two months with Sir John Eccles at the Bio-medical Research Institute at Chicago, followed by a period of work in the physiology laboratories at the University of Oxford. Dr. D. C. Stevenson was away for nine months, mostly undertaking research at the Institute of Aerospace Studies, University of Toronto, but also at the University of Canterbury, New Zealand, calibrating and testing a wind tunnel that he had himself designed some years earlier.

The dean spent some seven-and-a-half months away on study leave from January to August 1967, working for most of this time at the Georgia Institute of Technology at Atlanta, U.S.A., on a National Science Foundation project. Professor D. G. Lampard returned from seven months' study leave during April 1967, having spent his time at both Stanford University and the University of California at Berkeley. Professor N. W. Murray was on study leave at the University of Strathclyde for virtually the whole of 1967, visiting and lecturing at several other universities in Britain. The acting chairman of the departments of Electrical and Civil Engineering (Mr. K. Morsztyn and Dr. I. B. Donald, respectively), have been carrying out their duties in a most commendable fashion, as indeed did Professor R. G. Barden, during the dean's absence, as acting dean.

Professor I. J. Polmear (Materials Science) took up his duties in August 1967; Professor J. D. C. Crisp was appointed to a second chair in the department of Mechanical Engineering in July 1967. At present
he is away on study leave. The establishment of multi-chair departments is felt to be an important and strengthening step in this faculty.

Short overseas visits were made by Professor D. G. Lampard in May and September 1967, both in response to invitations to conferences. The first was on 'Information Processing in the Cerebellum' at Portland, Oregon; the second on 'Neural Communications' at the University of Keele, Staffordshire. Dr. S. J. Redman was also invited to both these conferences. Also, Professor I. J. Polmear visited the U.K. and the U.S.A. during September and October, mainly to study developments in the teaching of materials science. In addition he was invited to present a paper on 'New Developments in Aluminium Technology' at a symposium at Cleveland, Ohio, and he was able to attend a conference on electron microscopy in metallurgy arranged by the British Institute of Metals.

Prominent among the many visitors to the faculty during 1967 were:
Dr. J. E. Davidson—reader in chemical engineering, Cambridge University.
Professor Emmanuel Farzan—Statistics department, Stanford University.
Professor L. H. Van Vlack—department of Chemical and Metallurgical Engineering, University of Michigan.
Professor Nickolas V. Feodoroff—Manhattan College, New York.
Professor P. W. Rowe—department of Civil Engineering, University of Manchester.
Professor W. Johnson—department of Mechanical Engineering, University of Manchester Institute of Science and Technology.

The participation by visitors in seminars and colloquia within the faculty forms an important part of the scholastic activities in engineering.

Significant gifts of equipment to the faculty during 1967 have been three more transformers specially built by the Wilson Electric Transformer Company to the specifications of the department of Electrical Engineering and presented by Mr. Jack Wilson; a range of semi-conductor devices including several thousand transistors, diodes, etc., all products of the Texas Instrument Foundation; display arrays of valves (from H. & H. J. Wagg Pty. Ltd., West Melbourne), and of automotive parts (from Mr. F. Sera, Noble Park); a bearing research rig (from Division of Tribophysics, CSIRO); a gas turbine lecture aid kit (from Rolls Royce, England); a sectional model of a mono pump (from Mono Pumps (Australia) Pty. Ltd., Mordialloc).

The faculty continues to run special courses. In 1967 a course on materials and engineering reliability was held between 28 August and 15 September 1967, and attracted eleven enrolments from outside engineering organizations. A course, organized by Mr. J. A. Phillips and Dr. W. A. Brown, of the department of Electrical Engineering,
covered analogue computer techniques, and was attended by a number of members of staff from most faculties in the University.

The department of Chemical Engineering put on a display for visitors attending the 1967 ANZAAS Conference; similar displays were provided for the Royal Australian Chemical Institute and the Australian Institute of Food Science and Technology. These activities were regarded by the participants as excellent means of encouraging university-industry liaison. Members of staff of the department of Chemical Engineering participated in Section HE of the ANZAAS Conference, and also in the Fluidization Conference organized by the RACI and held at Monash University. Several staff of the department of Chemical Engineering have spent short periods working in industry during vacations, and this has promoted and maintained good relations between industry and the University.

The department of Mechanical Engineering started a ‘professional tutors’ scheme during 1967. Students were brought into contact with practising engineers to debate the many problems of employment opportunities and transition from the university to industrial life. The atmosphere was kept as informal as possible, and the venture regarded as highly successful and informative by both students and engineers. It is planned to continue this scheme.

After considerable delay, the Australian Universities Commission approved the sketch plans for stage 4 of the heavy laboratories (i.e., the remaining four bays in building 5). Detailed planning is now proceeding, but completion cannot be expected before 1969, even then probably not in time to make any effective contribution for the 1969 academic year. In any case these laboratories will necessarily be very rudimentary, since the funds available are so restricted. Growing concern has been felt during 1967 about the problems of inadequate accommodation confronting the departments in the faculty.

Shortly after the end of the November examinations an ‘information day’ was organized with the object of advising students completing their first year about the various choices of course that they had at their disposal. All departments collaborated, giving short addresses and conducting tours. The venture was very successful; some sixty-five students attended and the effort was clearly appreciated.

Faculty of Law—Dean: Professor D. P. Derham, M.B.E., B.A., LL.M. (Melb.)

The development of the law school continued during 1967 very much according to the original plan, after a slight slowing down in 1966 to allow for the delays which had been encountered in providing a law school building. By the beginning of 1967 there was reason to be confident that accommodation designed for a fully developed law
school would be available for use by the beginning of the 1968 academic year. The 1967 quota of new students was therefore raised to 250 and, during 1967, it was decided to stabilize the numbers entering the law school at 280, for 1968 and subsequent years. That figure was designed to produce a total student body of approximately 1,200 in accordance with the original plan. During the year, building work continued, but a little behind the builder's schedule. There were no serious causes for delay, however, and, at the time of writing this report, it is predicted that the law school building will be ready for use by the beginning of first term or within two weeks of that date.

Five of the planned fourth and fifth year subjects for the LL.B. degree course were offered for the first time in 1967 and staffing plans were made for the remaining subjects of the full five-year course to be offered in 1968. In the event, two of those subjects, Industrial Law and Advanced Constitutional Law, have had their introduction postponed until 1969. The postponements were decided upon partly because of staffing difficulties and partly because of the small numbers of students seeking to enrol in those optional subjects.

In all, nearly 600 law students, both undergraduate and graduate students, were enrolled for courses in 1967 and more than 750 will be enrolled in 1968—i.e., the law school at the beginning of its fifth year will be more than half way towards its ultimate size.

Staff were appointed during the year to enable development into 1968, as planned, to be carried out. Six new appointments at lecturer level and above were made, and nine new junior appointments. Of the junior appointments six were made to replace teaching fellows who left the staff at the end of 1967 to work overseas or to take up more senior appointments. Two teaching fellowships remained to be filled at the end of the year. In addition, steps were taken to fill the Sir Haydn Starke Chair of Law and it is hoped that an appointment will be made to this chair during 1968.

In September, Mr. Gerald Dworkin, who had been visiting lecturer in the law school during 1966 and 1967, left to take up his chair as professor of Law in the University of Southampton. Professor Dworkin was a very great success as a visiting teacher in the law school and it is desired to record the appreciation of the faculty, and in particular of his academic colleagues, for the work he did for the Monash law school. The law school is fortunate that Mr. J. D. McClean, B.C.L., M.A. (Oxon.) of Gray's Inn, Barrister-at-Law, has accepted an invitation to a visiting lectureship in the law school for 1968. Mr. McClean is a member of the faculty of Law of the University of Sheffield.

Of the senior teaching appointments made during the year special mention should be made of Mr. P. F. P. Higgins, LL.B. (Lond.), LL.M. (Tas.), Solicitor of England, who is relinquishing a senior lectureship in the University of Tasmania to take up duties as reader in law at this University at the beginning of 1968. Mr. Higgins did
not turn to the law until after he left the army in 1948 after serving, between 1932 and 1948, in India, Burma, Egypt, Palestine, and England. He has had wide experience as a law teacher and as a practitioner and is the author of a number of books and articles. His special interests are in the law of contracts and of torts, and in mercantile law and company law.

In November 1967, Miss Hilary Feltham accepted appointment as the law school’s first senior tutor. It is desired to record the faculty’s appreciation and thanks to Miss Pellham for the work she did as the faculty’s first secretary during its early years.

Mr. Terence Onto, a law graduate of the University of Melbourne, and a barrister and solicitor of the Supreme Court of Victoria, joined the law school as an administrative officer at the end of November 1967 as assistant to Mr. Allan York, the secretary to the faculty. Mr. Onto’s appointment completed the plan, originally approved by the Council in 1964, for the professional staffing of a central administrative office to serve the needs of the law school within the University’s scheme for de-centralized administration through faculty secretaries. It is hoped that, with proper clerical and secretarial assistance, the faculty secretary’s office in the law school can provide an efficient administrative unit for all law school needs without creating departmental administrative units. This plan was outlined in the document “A Plan for a New Law School” approved by the Professorial Board and the Council in 1964.

Two developments out of the ordinary during the year deserve mention. The Wilfred Fullagar Memorial Lecture Regulations were made by Council and arrangements were made for the first lecture to be given in the Alexander Theatre by Sir Douglas Menzies on 6 May 1968. The committee to manage the lecture series, established under the regulations, includes members of the faculty and of the Law Students’ Society. The student members, particularly Mr. Neill Anderson and Miss Christine Hill, have been very active, not only in the administrative promotion of this lecture series but also in the closed appeal to the legal profession for the establishment of a fund to carry the series on in perpetuity. The appeal will be conducted actively in the first few months of 1968.

Work proceeded in preparation for the production of the law school’s first teaching film under control of a strong committee consisting of representatives of the faculty, the Victorian Bar, and the Law Institute of Victoria. A contract was entered into by the University for the actual production of the film with Crawford Productions Pty. Ltd. It is hoped that the film will be completed and available for use by the second term in 1968.

The staff of the law school has continued to be very active in scholarly research and writing and the beginnings of graduate student activity is very encouraging. As to the first, the following
list of publications speaks for itself. As to the second, three theses for the LL.M. degree have been completed and delivered to examiners and one thesis for a Ph.D. degree is expected to be completed during the first half of 1968.

This is the last report which I shall be making to Council as dean and, in conclusion, I should like to say how much I have enjoyed being at Monash and the opportunity to share in the development of what I firmly believe will be one of Australia's great law schools. I should like to take this opportunity of thanking the University, the Council, and all its officers, for their help, co-operation, and friendship which I have enjoyed during the last four years.

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

1. Buildings

AUC requests for the triennium 1970-72 were submitted to include an extension to the animal house, a new building for biochemistry, and alterations in the multistorey block so as to provide more laboratory space which will arise from decanting departmental administration to the new biochemistry building.

The downtown building requirements will be met for the time being by the completion of projects 1967-68 and only minor requests are included in the submission, including five more bedrooms for students in residence at Prince Henry's Hospital and clinical rooms at Queen Victoria Hospital.

The totals on buildings since the faculty was established are:

<table>
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<tr>
<th>NET USABLE AREA (i)</th>
<th>COST (ii) $</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQ. FT.</td>
<td></td>
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<tr>
<td>EXISTING BUILDINGS</td>
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<tr>
<td>Medical School—Campus</td>
<td>107,623</td>
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<tr>
<td>Biomedical Library Stage 1—Campus</td>
<td>4,355</td>
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<tr>
<td>Central Animal House—Campus</td>
<td>2,665</td>
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<tr>
<td>Alfred Hospital Medical School Stage 1</td>
<td>39,803</td>
</tr>
<tr>
<td>Prince Henry's Hospital—Dept. of Medicine</td>
<td>5,166</td>
</tr>
<tr>
<td>Queen Victoria Hospital—Robert Menzies Block</td>
<td>37,823</td>
</tr>
<tr>
<td>Fairfield Hospital</td>
<td>3,060</td>
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</tbody>
</table>

| Total | 200,495 | 5,651,538 |
REPORT OF COUNCIL

<table>
<thead>
<tr>
<th>NET USABLE AREA (i)</th>
<th>COST (ii)</th>
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<tr>
<td>SQ. FT.</td>
<td>$</td>
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<tr>
<td>BUILDINGS PLANNED OR UNDER CONSTRUCTION (iii)</td>
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<tr>
<td>Bio-medical Library Stage 2—Campus</td>
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<td>Medical School Stage 2(a)—Campus</td>
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<td>Prince Henry's Hospital—Clinical School Stage 1/2</td>
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<tr>
<td>—Psychological Medicine</td>
<td>3,708</td>
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<tr>
<td>Queen Victoria Hospital—Antenatal Block</td>
<td>5,000</td>
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<tr>
<td>—Dept. of Paediatrics Extension</td>
<td>2,045</td>
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<tr>
<td></td>
<td>69,031</td>
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<td></td>
<td>269,526 sq. ft.</td>
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(i) Net usable area has been based on the revised AUC formula for measurement of building areas.
(ii) Costs include architects and Q.S. fees but not furniture or equipment.
(iii) Costs and areas for buildings planned or under construction are the latest estimates available.

2. Students

The demand for places appears still to be rising. For 1967, about 850 qualified applicants applied for the 160 places at Monash and the 220 at University of Melbourne. (For 1966 the corresponding figure was 634 applicants.) Of those eligible in first year sixty-one per cent held Commonwealth Scholarships.

The numbers by years in the Monash medical course for 1967 are: 1st year 160; 2nd year 161; 3rd year 133; 4th year 110; 5th year 100; 6th year 69; Bachelor of Medical Science courses 5, total 738.

3. Graduates

On 14 December 1967, sixty-one students graduated. Of the 69 who sat for final year examinations, 8 have been granted supplementary examinations. Their hospital appointments are as follows: Alfred Hospital 23; Prince Henry's Hospital 13; Royal Hobart 5; University of Kuala Lumpur Hospital 3; Singapore 3; Footscray and District 2;
Penang 2; Royal Perth 1; Ballarat Base 1; Queen Victoria 1; Launceston 1; Box Hill and District 1; Geelong and District 1; Mildura Base 1; Port Moresby 1; Royal Perth 1.

4. **Graduate Education**

A landmark in Australian medical education was the conference in Canberra (14-16 August 1967) on postgraduate medical education opened by the Federal Minister of Health, Dr. A. J. Forbes. There were eighty-eight participants from all Australian medical schools, government, teaching hospitals, postgraduate committees, Royal Colleges, College of General Practitioners and the Australian Medical Association. From Monash University the invitees included the dean, Dr. Warwick Newman, and Dr. Graeme Smith. The absence of formal graduate training, particularly in the intern year, was unanimously recognized and a manifesto to remedy the situation has been agreed on, which the various state bodies will now need to consider. The teaching commitment in its present unstructured form falls on the academic and visiting clinical staff, to which professors in the forty-six-week graduate teaching year gave an average of 4.2 hours per week, and sub-professorial staff an average of 2.8 hours per week. This is, for professors, in addition to the average of 6.5 hours per week on undergraduate teaching, an average of eleven hours’ clinical commitments, and 4.6 hours of committee work. It should be remembered that, unlike the twenty-six-week academic year on the campus, this schedule continues in the main throughout the year.

Most of our students in their sixth year take (and so far all have passed) the Educational Council for Foreign Medical Graduates’ (U.S.A.) examination (see item 7 of my report to Council 1966, also 5 below) thereby qualifying them for intern appointments in the U.S.A. and Canada. In these countries the graduate training programme for interns has for many years been a carefully structured, well thought out course. Many medical educators are becoming anxious about the possible brain drain to U.S.A. in the intern year (six in 1966 from Australia; for 1967, three from Victoria—the number from Australia is not yet known) particularly in view of the possible shortage of intern places in Victoria (see below).

The faculty is well aware of these problems and intends to take a leading part in the promotion of an adequate graduate training programme, through the Melbourne Postgraduate Committee, the Royal Colleges, and other bodies on which it has members.


This test, taken by seventy-four medical schools throughout the world, was done by fifty-eight of the sixty-six in final year and all passed. The results are shown in the following table:
The countries which take this test include many medical schools from the United Kingdom, Europe, Asia, and South America, so that the results on a world comparative basis, having regard to the type of test, which is based entirely on multiple choice questions, are very satisfactory.

6. **Intern Places**

The big increase in the number of graduates (150 for many years until 1965, rising to 368 in 1972) has stimulated the Hospitals and Charities Commission to examine the number of suitable intern places available in the next few years. At present there are only about 200.

The dean, in company with some members of the Melbourne Postgraduate Committee (on which he is a representative of the University), Royal Colleges and Australian College of General Practitioners, has toured larger country hospitals in four separate trips over the last three months of 1967 to inform himself about the possibility of further intern places. In all, twenty centres were visited, discussions held with over 100 doctors and 1650 miles travelled. I believe this was well worth while since it revealed excellent opportunities for expanding graduate training programmes on a rotating basis with teaching hospitals: allowed for the exchange of ideas: and has established cordial relations between the faculty and many important country centres.

7. **Curriculum**

The faculty continues to give close attention to the curriculum, which has not changed significantly over the last three years.

On Saturday 25 November a special meeting of the faculty executive was held at the University, attended by eighteen members, and extending over the whole day, for the purpose of a comprehensive study of the curriculum. Special attention was given to the need for increasing participation of universities on graduate training programmes.
because of the clear aim of our curriculum (as in nearly all other modern day medical schools) to graduate the "undifferentiated physician", who must have considerable further training, particularly in vocational and technical aspects of medicine, to make him safe, useful and rounded in his education.

The full report can be found in the minutes of the executive committee. No radical changes are contemplated at present.

8. **Staff**

There were, on 31 December 1967, the following staff members in the faculty: academic (full-time) 91; (part-time) 12 (total 103); administrative 9; technical 141; clerical 33; clinical instructors 199.

Professor R. Porter assumed his post as a professor of Physiology on 5 June.

Professor Marmion has been appointed to the chair of Bacteriology, University of Edinburgh.

Professor S. Faine has been appointed to the chair of Microbiology, and becomes the chairman of the department.

Professor B. Hetzel (Michell Professor of Medicine—University of Adelaide) has been appointed to the foundation chair of Social and Preventive Medicine.

The second chairs of Medicine and Surgery and the foundation chair of Psychological Medicine have all been advertised.

9. **Research**

Perusal of the particulars on pages 5-17 listing the 194 publications from the faculty will give an indication of the wide range of basic and clinical research in the faculty.

ARGC grants to the faculty totalled $48,758; AUC grants totalled $15,253; and grants from other sources totalled $177,051; an aggregate of $241,062.

10. **G.M.C. Visitation**

Following the visit of the General Medical Council representatives in November 1966, we had notice on 31 March 1967 that our degrees had been accepted in the following terms "that the degrees of M.B., B.S., granted by Monash University, Victoria, be recognized for the time being by the Council under sections 18 and 20 of the Medical Act 1936". We took the opportunity to revise the submission and this was published in booklet form in May 1967. This now gives a very full summary of the faculty—its origins, development and aims, student numbers and selection methods, the curriculum, regulations, staff, research activities, finance, and a considerable amount of demographic data. It would seem well worthwhile to revise this booklet each triennium.
Faculty of Science—Dean: Professor K. C. Westfold, B.Sc., M.A. (Melb.), D.Phil. (Oxon.)

During 1967 members of the faculty received with sorrow the news of the death, after a long illness, of its foundation professor of Zoology and Comparative Physiology and first dean of the faculty, Professor A. J. Marshall. A faculty board minute was recorded, expressing appreciation of his many contributions to the faculty and university as a whole, and to his personal qualities.

The only new chair filled was that of genetics, by Professor B. W. Holloway, who is in the dean’s department pending determination of the future status of this subject. Professor Holloway will in 1968 contribute units to second and third year biological subjects in the faculty.

The number of first year students admitted to the faculty increased by 50 to 350. New courses introduced were Psychology IIB and IIC, Botany IIB and IIC, Biology IIC, and Microbiology IIIIB, the latter with a quota of 12 students. New courses approved for 1968 were Chemical Engineering Science IIB and Microbiology IV. The regulations were revised in such a way as to provide for two degrees, B.Sc. and B.Sc. (hons.), in place of a single degree taken at pass and honours levels.

During the year it was decided to abolish the course Biochemistry IIIA as from 1968, but, subsequently, owing to the likely imposition of quotas in Chemistry IIIA and IIIB (see report under department of Chemistry) in 1970, it was agreed to retain the course for the present.

It will be noted from the individual departmental reports that one of the faculty’s chief concerns is to keep school teachers abreast of their subject. Departments have expressed their willingness to extend their extra-mural activities into the realm of professional refresher courses on a regular basis, if their staff, accommodation, and maintenance grants would so permit.

In December a seminar on problems of transition from schools into the faculty of Science was arranged by the Monash University Association with the co-operation of the chairman of the science departments. Vigorous participation by students, teachers, and staff indicated that this provided a fruitful forum for the exchange of views and the communication of information.

The scheme for awarding Division II passes in the first and second year examinations announced in the 1966 Report, went into full-scale operation this year. It appeared that the procedures of the Board of Examiners were thereby greatly facilitated.

The number of students enrolling for higher degrees continued to rise. Figures for 1965, 1966, and 1967 are 134, 183, and 232, respectively. The M.Sc. regulations were liberalized in such a way as to admit to candidacy non-graduates who have qualifications and ex-
perience that are regarded as a suitable preparation for their proposed field of study.

These general notes should not be concluded without mention of the very large effort that was required in all departments, but particularly in the faculty office, to complete the forms required for the 1970-72 AUC submission. Would that this additional effort might produce a commensurate response from governments!

Department of Botany

First year numbers in Biology I, taught jointly with the department of Zoology, rose slightly to 352; the subject matter and organization were little changed from 1966. The first classes in Botany IIB (ten students) and Biology IIC (twenty-one students), a joint course with zoology, were run. There were four graduate students.

Dr. T. P. O'Brien was appointed to the staff as senior lecturer and Mr. P. F. Lumley was promoted to lecturer.

An ARGC grant of $2,821 was made to Professor M. J. P. Canny and Mr. Lumley to continue their 1966 translocation programme, and an initial grant of $3,807 was made to Dr. O'Brien for an investigation into the cell biology of grasses with special emphasis on cereals. Additional grants were from the Wheat Industry Research Council to Dr. A. A. Holland—$13,393 over three years, the M. Gibson research committee funds, Botanic Gardens, to Dr. D. M. Churchill—$1,000 toward publication costs of an index of Victorian plant species and their distribution, and Sou'West Frozen Foods to Mrs. A. M. Lindsay—$1,000 for research on abscission in pea pods.

The department was also fortunate in obtaining from the department of Botany, Belfast, on indefinite loan to Professor Canny, a nuclear Chicago "dynacon" ionization chamber.

Current research programmes in the department are as listed below:

Translocation of organic compounds in the phleom (Professor Canny and Mr. Lumley); analysis of microfossils from sediments of volcanic lakes in Western Victoria; survey of Victorian plants (Dr. Churchill); Effect of desiccation on the growth and survival of roots (Dr. D. F. Gaff); serologic investigation of Ophiobolus graminis (Dr. Holland); Histology and electron microscopy of plant tissues (Dr. O'Brien).

The development of the department of Botany is now seriously restricted by lack of space. There is room for no more staff and for only one or two graduate and honours students. Planning has proceeded throughout 1967 for the science south building which is to house botany. AUC approval of the preliminary sketch plans was delayed so long that the building cannot now be ready before mid-1970.

The site of the experimental garden has been moved to a permanent position near the CSIRO chemical research laboratories. There the building and development of a complex of glasshouse, headhouse, and
laboratory buildings is proceeding, next to the grounds section nurseries and near sources of water, power, and heat.

Department of Chemistry

Two new senior teaching fellows were appointed during the year, Dr. M. E. Redwood and Mr. K. R. Roby, and two professional officers, Mr. D. Rash and Mr. R. M. Groenewould. One of the three University postdoctoral fellows, Dr. I. D. Rae, took up duties in the department, and is conducting research on the synthesis of some complex natural molecules. Dr. A. D. E. Pullin spent part of the year on study leave at the University of Exeter and Dr. A. L. Jones left on study leave at the end of the year to go to University College, London.

Fifty-three students (36 IIIA, 17 IIIB) successfully completed their B.Sc. with chemistry as a major. Twelve completed their honours degree and two completed work for the M.Sc.

Seven new Commonwealth Postgraduate Awards were made to graduate students. R. A. Spence became the first recipient of the Applied Chemicals Scholarship.

Messrs. N. F. Cheetham, A. J. Jones, G. P. Pez, and D. B. Yawney completed their Ph.D. studies and proceeded on postdoctoral fellowships to Southampton University (U.K.), University of Utah (U.S.A.), McMaster University (Canada), and Bristol University (U.K.), respectively. Mr. J. S. Josan joined the Dunlop Rubber Company and Mr. D. F. Kerr joined the Colonial Sugar Refinery on completing their Ph.D. studies.

The department received a number of ARGC grants for projects under the direction of Dr. B. M. Gatehouse, Dr. G. B. Deacon, Dr. R. S. Dickson, Professor B. O. West, Dr. D. S. Black, Professor J. M. Swan, Dr. M. L. Heffernan, Dr. B. A. W. Coller, Dr. F. R. Burden, and Professor R. D. Brown. A Wool Board Research Grant of a Senior Research Scholarship was received for Mrs. N. Rehak to work with Professor B. O. West on the co-ordination chemistry of some metals important in sheep nutrition. Grants to Professor Swan from the Australian Meat Research Committee and from Merck, Sharp, and Dohme (Australia) Pty. Ltd. have continued. The Victorian Anti-Cancer Council made a grant of $19,000 jointly to Professor J. Bornstein (Biochemistry) and Professor Swan for research on cigarette tar. A collaborative project between the departments of Chemistry and Pathology in the field of radioimmunology has continued and a postdoctoral fellow, awarded to Professor R. C. Nairn (Pathology) by the NH and MRC, is housed in the department of Chemistry.

The Hitachi-Perkin Elmer mass spectrometer has been delivered and put into commission. The major project of the design and construction of a large microwave Zeeman spectrometer steadily progressed throughout the year. It is hoped that it will be ready for preliminary testing in the early part of next year.
Research activities are proceeding on an increased scale on various broad areas of organic synthesis, biological chemistry, inorganic chemistry, organometallic chemistry, solid state structural chemistry, physical chemistry, of solutions, molecular interactions, spectroscopy, and theoretical chemistry.

Outside the University, Professor West and Dr. F. W. Eastwood continued to serve on the VUSEB Standing Committee on chemistry. Professor Swan, Dr. Eastwood, and Dr. J. B. Youatt published a programmed text on organic chemistry for use by first year classes and Professor Swan and Dr. Eastwood published a similar text covering the organic chemistry content of the matriculation syllabus.

Professor Brown was invited to attend the Chemical Society Anniversary Conference at Exeter in May where he delivered a plenary lecture on polarities of hydrocarbons. He was an invited overseas speaker at the Gordon Conference in Inorganic Chemistry in New Hampshire, U.S.A., in August. Professor West gave invited papers at the Nara Symposium on Stereochemistry in Japan in September and the third International Organometallic Symposium (Munich, August).

Professor Brown joined the organizing committees for the XXII International Union of Pure and Applied Chemistry Congress and XII International Co-ordination Chemistry Conference (Sydney 1969) and the International Magnetic Resonance Conference (Monash, 1969). Professor Swan was elected as president of the Victorian Branch of the RACI and was also appointed for three-year terms to the Wool Textile Research Advisory Committee of the Australian Wool Board, and the Advisory Council of CSIRO. Professor West was elected to the Council of the Royal Australian Chemical Institute and to the editorial advisory board of *Reviews of Pure and Applied Chemistry*. Dr. Gatehouse was co-organizer of the Australian Crystallographic Conference held at Monash in August. Dr. Dickson became co-editor of *Reviews of Pure and Applied Chemistry*.

Many staff members gave invited lectures at conferences and meetings of scientific societies during the year.

Accommodation became an increasing problem during the year, but was temporarily alleviated when the first part of the locker-room conversion became available for housing two staff members and seven graduate students. The undergraduate accommodation, particularly with respect to second and third year laboratories, will become serious in the near future and a recommendation to the faculty has been made, with great reluctance, that a quota of eighty-four Chemistry IIA and forty-two Chemistry IIIB students be set until the laboratory accommodation problem is alleviated. (The size of building and the plans originally devised by the planning architects in 1960 for the Council aimed at catering for 160 students in second year, seventy in third year, and forty-five fourth year and postgraduate students. By minor internal modifications the same building will currently cope with approximately
200 second year, 126 third year, and sixty-eight fourth year and postgraduate students.) On present projections of student numbers the third year quota could become operative in 1970.

Department of Mathematics

Accommodation difficulties continue and during 1968, with the department probably split up into four separate segments, they will become much worse.

Joining the department in 1967 were Dr. B. P. Leonard, from Cornell University, as a lecturer, Mr. N. Cameron, from Waikato University, as a lecturer, Dr. A. Ghosal, from the Indian Council of Scientific and Industrial Research, as a senior lecturer, Dr. R. S. Anderssen, from the University of Adelaide, as a lecturer, Dr. M. A. B. Deakin, from the University of Chicago, as a lecturer, Dr. C. F. Moppert, from the University of Melbourne, as a senior lecturer, and Mr. G. A. Maxwell, from the A.N.U., as a teaching fellow. Professor B. R. Morton’s appointment to a chair of Applied Mathematics was announced in last year’s report; he arrived to take up his appointment early in the year.

Visitors to the department during the year included Professor C. J. Eliezer, of the University of Malaya, Professor P. Ledoux, of the University of Liège, Professor A. P. Guinand, of the University of Trent, Dr. S. Brenner and Dr. M. C. R. Butler, both of the University of Liverpool, and Mr. K. McR. Evans, of Scotch College, Melbourne.

Dr. R. S. Anderssen, Dr. D. H. W. Held, Mr. G. A. Maxwell, and Mrs. E. Held resigned their appointments in order to take up research appointments elsewhere.

Degrees completed in 1967 were: 12 honours B.Sc.; 1 honours B.A.; 1 M.Sc.; 1 Ph.D.

Active research continued in many areas of mathematics as is evidenced by the list of publications appended.

The Journal of the Australian Mathematical Society continued to be edited from Monash. Professor Preston continued as editor, Professor J. B. Miller, with Dr. Deakin taking over half-way through the year, continued as assistant editor and Professor R. Van der Borght, Dr. E. Strzelecki, and Dr. G. A. Watterson continued as associate editors. Dr. Ghosal edits Opsearch, the journal of the Operational Research Society of India.

The School Mathematics Research Foundation completed its first project with the publication of the two volumes of Mathematics for Today and Tomorrow.

Several visits were made by members of staff to schools in Victoria to discuss the new mathematics syllabuses. A course of nine lectures was given at Monash during the second term to high school teachers on the new sixth form syllabus. About 120 teachers attended.
Department of Physics

For most of 1967 Professor R. Street, the chairman, was on study leave, mainly at the Clarendon Laboratory, Oxford, and at the scientific research laboratories of the Ford Motor Company at Dearborn, Michigan. The acting chairman for the year was Professor H. C. Bolton.

In 1967 the department had 900 undergraduate students of whom twenty-two were honours students, and fifty research students; thirty-eight students graduated in physics. The following students gained higher degrees and their addresses at the time of writing are given after their names; M.Sc.; P. N. McIntyre (China): Ph.D.; T. J. Bastow (Cavendish Laboratory, Cambridge), R. A. Brown (Macquarie University), R. H. Dunhill (Leicester, U.K.), C. J. Gillespie (Manitoba), C. F. Osborne (Harwell, U.K.), B. Window (Harwell, U.K.), David Browne, P. P. Phakey (Monash, Physics). New members of staff were Dr. R. J. Fleming and Dr. G. V. H. Wilson, the latter having been a Queen Elizabeth II research fellow in the department. Dr. R. W. Hill joined the department for a year as a senior lecturer, on leave from the Clarendon Laboratory, Oxford. A substantial addition to our activities was made by Professor S. Chikazumi, visiting Leverhulme fellow from the Institute for Solid State Physics in Tokyo, who stayed for three months, collaborating in the research programme on magnetism. One of the three University postdoctoral fellows, Dr. A. Spry, joined during the year to collaborate in the research programme on mineral structures.

Members of the department attended a variety of conferences and summer schools. Professor Street and Dr. Wilson read papers at the Boston International Conference on Magnetism in September 1967; Dr. Wilson read a paper at the conference on nuclear orientation in San Francisco in August 1967. The Sixth Australian Plasma Physics Conference at Lucas Heights in February 1967 was attended by Mr. J. L. A. Francey and three research students; two papers were read. Dr. J. R. Chamberlain read a paper at the Sixth Australian Spectroscopy Conference in August at Brisbane. Drs. G. C. Fletcher and A. P. Roberts and several research students attended the Seventh Summer Research Institute of the Australian Mathematical Society in Canberra in January and February 1967. The departments of Physics and Chemistry at Monash were the hosts of the Fifth Meeting of Australian Crystallographers in August 1967; the organizers were Dr. B. M. Gatehouse (Chemistry) and Professor Bolton. Papers from the department of Physics were read by Dr. J. H. Smith, Mr. G. J. F. Troup, Dr. A. C. McLaren, and Mr. L. A. Bursill.

Visitors to the department, most of whom gave colloquia, were Professors S. R. Kapitsa (Moscow), whose talk on “Soviet Science and Education” was deservedly popular, Y. Uemura (Tokyo), R. L. F. Boyd (London), D. V. Shirkov (Novosibirsk), J. G. Powles (Canter-
The department was sorry to lose from its staff Mr. D. Browne and Dr. R. H. Donaldson. In particular Dr. Donaldson had contributed to the valuable links between the department and local school teachers by being on the panel of leaving examiners and giving lectures to high school matriculation teachers. These lectures were arranged by Mr. R. T. White, secretary to the chairman (Dr. J. A. McOmond) of the physics matriculation committee of VUSEB. During the year Mr. White was invited to take up residence in the department. Other members of the department have been active on the committees of the VUSEB.

The research work of the department was materially assisted by grants from the Australian Research Grants Committee. Grants totalling $40,000 were made to Professor Street and Dr. Wilson for magnetic studies, to Dr. McLaren for mineral studies, and to Mr. Troup for studies in quantum electronics. Mr. Troup was appointed one of the international advisory editors of the new journal Opto-Electronics published by Chapman and Hall.

There will be an international symposium on electron and nuclear magnetic resonance, sponsored by the Australian Academy of Science, at Monash University in August 1969. The decision to have this symposium was made in 1967 by the symposium chairman, Dr. C. K. Coogan of the Division of Chemical Physics, CSIRO, in consultation with the departments of Physics and Chemistry at Monash. From the Physics department we have Professor Street on the organizing committee, Dr. J. R. Pilbrow as symposium secretary, Professor Bolton as chairman, and Dr. Wilson and Mr. Troup as members, of the programme committee.

The department noted in passing that one of its research students, Mr. R. H. Dunhill, captained the University rugby team for a season so successfully that it will move into first grade in 1968, and that several members contributed in several ways to the success of the team.

The steady increase in the numbers of research workers (50 in 1967, 63 expected in 1968) and the steady growth in their material activities was evidenced during the year in various ways. Thus, the output from the helium liquefier was fully absorbed in the laboratories; the demands for liquid nitrogen were so great that a new storage tank had to be installed during the year; the laboratories housing one of the large magnets was converted so that more equipment could be installed on overhead gantries and the magnet itself mounted on a movable base. Perhaps the most critical aspect of the increase in activity is the sign of overcrowding, not only of research students but also of staff. It is unhappy to record staff sharing rooms. At the very least, undergraduate contacts suffer, but there are greater losses in this over-
crowding. The work to complete the forms needed for the AUC submissions of 1970-72 was often done with these aspects of our academic society much in mind, and it is hoped that further accommodation will soon be available for the growth of the department.

**Department of Psychology**

During 1967 there was a marked increase in the number of students enrolled in Psychology I compared with the first year of teaching, 1966. Excluding students taught in third year medicine and engineering, the total undergraduate enrolment in science and Arts was 384. Psychology IIIB was undertaken for the first time in 1967 and is to be followed by Psychology IIIB in 1968. The graduate-student enrolment was eleven, of whom two were part-time. It is anticipated that the first students to graduate with majors in psychology will do so in 1968. It is also anticipated that the first awards of M.Sc. and Ph.D. will be made in 1968.

During the year one lecturer and three senior teaching fellows were appointed, and an establishment for a laboratory manager was approved for 1968. The department is shortly to lose the services of Dr. A. G. Worthington, who has been appointed associate professor, department of Psychology, Trent University, Canada, from July 1968, and Mr. G. von Sturmer who has been appointed lecturer in psychology, University of Auckland.

An ARGC grant of $4,897 was made to Professor R. H. Day and Mr. W. R. Webster—The physiological basis of attentional mechanisms, and one of $10,400 to Mr. A. D. Perriment—Responses to bimodal signals. Mr. Perriment also received a grant of $470 from the Department of Civil Aviation.

Outside the University, Professor Day was appointed to membership of the Academic Committee, Australian College of Speech Therapy, to advise on the psychological content of the syllabus. He continued as associate editor, *Australian Journal of Psychology* and as consultant editor, *Perceptual and Motor Skills* and *Psychological Reports*. Most members of the department acted as consultants to the *Australian Journal of Psychology*. Mr. M. B. Macmillan continued as book review editor, *Australian Journal of Psychology*. Professor Day gave invited lectures at the Australian Psychological Society Conference in Adelaide in August, the Society for Biological and Medical Engineering in Melbourne in October, and the Joint Conference of Illuminating Engineering Society and Building Science Forum in Sydney in October. Various members of the department made contributions at the Adelaide ANZAAS congress in January, the Australian Psychological Society Conference in Adelaide in August, and the Canberra Symposium in Perception, in Sydney in May and in Canberra in November.

The main problem facing the department of Psychology during the next few years is that of accommodation. Additional space in the
science south building is unlikely to be available until early in 1969. It is hoped that a new building, stage 3 medicine, will solve this problem in the next triennium. With increases in academic, technical, and clerical staff over the next two years, and with increasing numbers of students at both undergraduate and graduate levels, the situation will be very difficult.

**Department of Zoology and Comparative Physiology**

The department suffered a great loss by the death, in June, of Research Professor A. J. Marshall, formerly foundation professor. The vacant chair was re-advertised, but so far no appointment has been made. Dr. D. G. Davis, who held the position of acting professor, resigned in June to take up an appointment in the department of Biology, University of Western Ontario. Dr. J. W. Warren took over the post of acting professor.

Biology I was taught jointly with the department of Botany. 352 students—approximately half from the faculty of Medicine and half from Arts and Science—attended duplicated sessions both in lectures and practical work. Biology IIC (twenty-one students), a new course, was also taught jointly with the department of Botany. Zoology IIB (twenty-nine students) was remodelled to involve a comparative morphological approach; the laboratory sessions again had to be duplicated. Now an annual feature of this course, the May visit of students and staff to the Heron Island Station was again beneficial.

Third year zoology was taught on the same lines as in 1966, but with a more clear-cut division of the subject into the following five units: (1) comparative physiology, (2) ecology, (3) genetics and development, (4) paleontology and ethology, (5) biostatistics and techniques. Plans were formulated to lead to a blending of this unit system with those being developed by other departments in the area of biological sciences. Zoology IV (eleven students) was also run on a unit system which included a compulsory research unit. A conservation and applied ecology unit in the honours course was a new departure and involved co-operation with, and speakers from, the Soil Conservation Authority, the Forests Commission, the Fisheries and Wildlife Department, the National Parks Authority, and the Vermin and Noxious Weeds Control Board.

Research activities in the department continued to be diverse. Grants from the ARGC were $3,195 to Dr. Davis (drosophila developmental genetics), $1,050 to Dr. Dorward (biology of the Cape Barren goose), $4,000 to Dr. Ettershank (microclimate regulation in desert ant nests), $1,200 to Dr. Lee (adaptations of amphibians to arid environments), and $3,700 to Dr. Nelson (ecology and behaviour of Dasyurus and Satanellus). In addition Drs. Ettershank and Dorward received grants from the Ian Potter Foundation. Dr. Dorward's project was a joint one by arrangement with the Fisheries and Wildlife Department, which
provided facilities and transport including the building of a field re­
search cabin on Glennie Island, Wilson's Promontory. Dr. Dorward's 
student, Mr. Ian Norman, received a grant from the F. M. Chapman 
Memorial Fund. Dr. Nayudu received an award from the AINSE to 
enable him to attend a radio-isotopes course at Lucas Heights.

Of the visiting workers, Dr. K. G. McKenzie, Shell Research Fellow, 
resigned in November to take up an appointment at the British 
Museum, Dr. B. H. Brattstrom, California State College at Fullerton, 
and Dr. R. E. Macmillen, Pomona College, Claremont, California, re­
turned in June, Dr. E. S. Reese, department of Biology, University of 
Hawaii, arrived in November for three months, and Mr. R. Norby, 
University of North Dakota, Fulbright Postgraduate Student, arrived 
in August for twelve months.

Visitors who gave seminars were Professor G. L. Clarke, Woods 
Hole Oceanographic Institution, Harvard University; Bro. G. Nichols, 
F.S.C., De la Salle College, Philadelphia; Dr. K. S. Thomson, Dep­
artment of Geology, Yale University; Professor P. M. Sheppard, 
F.R.S., University of Liverpool; and Dr. J. H. Kaufmann, University 
of California at Berkeley.

Most staff members have been associated with teaching or research 
activities outside the University. To cite a few examples: Dr. Etter­
shank presented a lecture course at Leningrad Zhdanov University as 
the first Monash visitor under the exchange scheme with that Uni­
versity. Dr. Lee, assisted by other members of the department, was 
involved in the preparation of "The Web of Life", the new text book 
for matriculation Biology courses in Australia. Dr. Warren was chair­
man of the Victorian Division of the Geological Society of Australia.

No progress was made towards the desirable end of obtaining a 
field station.

Computer Centre

Staff appointed in 1967 were, as senior lecturer, Dr. J. C. B. White 
from the University of Melbourne department of Chemistry, and as 
lecturers, Mr. M. P. C. Legg from Monash University department of 
Mathematics, and Mr. L. Whitehouse from Control Data Corporation. 
Mr. P. Annal was appointed as engineer from the Monash University 
department of Electrical Engineering, and Mr. J. Whittle from the 
Defence Standards Laboratory as senior programmer.

Four introductory courses on "Computers and Fortran Program­
ning" were presented in 1967, to a total of approximately 500 stu­
dents. About sixty per cent of these were undergraduate students from 
various University departments, the remainder being graduate students, 
University staff members, and a few persons from outside the Uni­
versity. The director, Dr. C. J. Bellamy, gave a paper at the N.S.W. 
Government Symposium on the Uses of Computers in Medicine in 
Sydney in August.
An informal advisory and consulting service provided for computer users and others constitutes a significant part of the teaching activity of the centre.

The following items of equipment have been delivered to the centre during the year:
- PDP-8 computer and data interface
- Five teletype units
- Additional core storage (16K) for the CDC 3200 computer
- Two magnetic-disc units, each of four million-character storage capacity
- Ferranti “Sirius” computer (gift from ICIANZ)

The extra core storage and the magnetic-disc units have considerably increased the computing capacity of the CDC 3200 system, so that despite a large increase in demand, the standard of computing service provided by the centre has been maintained.

Programming and constructional work is proceeding to link the teletype units (which will be placed in remote locations around the University campus) through the PDP-8 computer to the magnetic-disc files; users will then be able to form and edit files of information and submit them to the 3200 computer for processing, from these remote locations.

The Ferranti “Sirius” computer has been installed in the department of Chemistry, and will operate as an integral part of a nuclear magnetic resonance spectrometer there.

*Operational Statistics (3200 system)*

- Hours of operation—4630
- Number of programmes run—53400

Analysis of operational usage:

- Undergraduate teaching and departmental projects: 20%
- Staff and graduate-student research projects: 50%
- University administration data processing: 20%
- Contract processing for outside agencies: 10%

During the year the computer centre has been engaged by agencies outside the University for a number of data-processing contracts; several of the centre's full-time and part-time staff members are employed solely for this work. Income derived from these contracts has been used to off-set the very considerable capital costs involved in establishing and maintaining the computing system.

The major data-processing contracts have been carried out for the Victorian Universities and Schools Examinations Board, the Victorian Universities Admissions Committee, the Australian Council for Educational Research, and the Bureau of Mineral Resources. Further details of these activities are contained in reports to the computer centre committee.
We list below brief descriptions of research work being carried out in the centre.

(a) A project to investigate data structures and data relationships has been initiated by Mr. Legg.

(b) Very extensive files of data which are accumulating through contracts with the VUSEB, and ACER (see preceding section), and from other sources, are being used as the basis for research into various aspects of student assessment.

(c) A project to develop computer-based hospital information and record systems is proceeding, in collaboration with the Hospitals and Charities Commission, and with several Melbourne hospitals.

(d) A small computer system for remote control and recording of hospital laboratory analyses has been developed by a study group from the Hospitals and Charities Commission, working with the centre; the system is now under construction.

(e) In parallel with the development of the remote-terminal system (section 3) a project to investigate various aspects of multi-access and time-sharing computer systems is being planned.

In the latter part of the year new office space became available in a converted locker room, and this greatly eased the accommodation problems which had faced the staff in the centre. While office space is still not sufficient for the staff's needs, most members have been reasonably accommodated, and it has been possible to clear a passageway previously used for office work.

Library—Librarian: Mr. E. H. Clark, B.A. (Melb.), F.L.A.A.

By the end of 1967, the University library had grown to approximately 271,500 volumes. 6,393 periodicals were being currently received.

Stock was distributed as follows: the main library (165,600 volumes), the Hargrave Library, for the physical sciences and engineering (36,500), the law library (23,600) and the bio-medical library with 22,750 volumes on the Monash campus, 9,225 at the Alfred Hospital, 1,827 at Queen Victoria, and further small collections at Prince Henry's, Fairfield, and Royal Park Hospitals.

Space was at a premium throughout the library system. As anticipated the main library was mostly overcrowded, the bio-medical library, at both its campus and Alfred Hospital locations was almost impossible to operate, and some strain was felt in the Hargrave Library. With the completion of the law school building early in 1968, which has library space temporarily beyond its requirements, some relief can be expected because of space that will be temporarily available there for other library purposes. Movement of the law library itself will release space in the Hargrave Library, the main library will occupy one floor of the new law school and the bio-medical library, whose campus extensions commenced at the end of the year, will occupy another floor of the
law school until the extensions are completed. Some stack space in
the basement of the medical school at the Alfred Hospital is also
promised.

Loans for the year were as follows:

<table>
<thead>
<tr>
<th></th>
<th>Staff</th>
<th>Student</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Library</td>
<td>22,226</td>
<td>141,345</td>
<td>163,571</td>
</tr>
<tr>
<td>Hargrave</td>
<td>18,616</td>
<td>34,240</td>
<td>52,856</td>
</tr>
<tr>
<td>Bio-medical</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Monash</td>
<td>20,558</td>
<td>16,608</td>
<td>37,166</td>
</tr>
<tr>
<td>(b) Alfred</td>
<td>7,619</td>
<td>5,840</td>
<td>13,459</td>
</tr>
<tr>
<td>(c) Queen Victoria</td>
<td>2,653</td>
<td>908</td>
<td>3,561</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>71,672</td>
<td>198,941</td>
<td>270,613</td>
</tr>
</tbody>
</table>

Photocopying services were again heavily in demand, augmented by
a further machine made available to the Alfred Hospital. Prints pro-
duced for staff and students amounted, overall, to 164,399.

At the end of 1967, the library staff establishment totalled 123.

Through the inter-library loan service, 7,940 items were obtained
from other libraries. Monash loans to other libraries totalled 2,833. It
is pleasing to note that, with the improvement in our stock, we are
able both to reduce the burden we have placed on other libraries, and
also, increasingly to assist them in return.

The Council's appreciation of the many gifts received by the
library has been conveyed to their donors. The library is most fortu-
nate in receiving these valuable additions to its resources.

The library has made considerable advances in the field of computer
applications. Since 1966 techniques have been developed in the
Monash library for the application of data processing technology to
the provision of services in the student reading, periodicals, and
cataloguing sections of the library's operations. The provision of
current weekly lists of materials set for student reading has become
a regular feature of library service, and has provided a computer file
capable of ready analysis to assist in the processes of planning for
future requirements. Information regarding holdings of periodicals
currently received has been listed by computer and published for
distribution over the campus. Development work in the cataloguing
field is also proceeding, with a view both to utilizing some of the
products now becoming available from computer-assisted processes
elsewhere, and to creating computer records at Monash which will in
time perhaps serve to augment regional resources of bibliographic
data. The pace of development in these fields of automation must,
however, be regulated to some extent by the availability and suitability
of equipment.
6. STUDENT ENROLMENT

The net total undergraduate population increased from 5,254 in the previous year to 6,182, an increase of 928 or eighteen per cent. Postgraduate enrolments increased from 372 to 475 and total enrolments of all students from 5,924 to 7,120. Full details of enrolment are given in the table opposite.

Of these 7,120 students, 400 (5.6 per cent of the total) were from overseas, as follows:

- Burma 1; Canada 4; Egypt 1; Fiji 4; Gilbert Island 1; Great Britain 9; Hong Kong 42; India 14; Indonesia 20; Israel 2; Japan 1; Kenya 1; Macao 1; Malaysia 190; New Zealand 9; Pakistan 5; Papua and New Guinea 2; Peru 1; Rhodesia 1; Singapore 44; South Africa 2; Thailand 20; South Vietnam 14; U.S.A. 9; West Germany 2.

7. STUDENT FACILITIES

Student Residence

Once again it has regrettfully to be reported that no solution has become apparent for the housing and transport problem of the University. As student numbers increase, the area in which lodgings are taken expands and the distances travelled by students grow disquietingly. Public transport facilities, however, do not increase correspondingly and there appears to be no end to the waste of time and money to which successive Council reports have drawn attention. The transport problem also, of course, increases the number of cars that crowd local roads at peak hours and creates car parking problems on the University site throughout the day—also at considerable cost. An inevitable result of all these facts is that more and more students are accepting lodgings which are less than satisfactory and that hamper their work.

No extension of the halls of residence complex has taken place during the year, but negotiations continue with the Australian Universities Commission on how the $960,000 capital grant made available for halls in the current triennium can most advantageously be used. Meanwhile, in the light of experience since 1962, an investigation is being made into the administration of halls, with a view to establishing procedures which will be both economic and educationally sound for the considerable complex which it is hoped ultimately to build.

Health Service

The pattern of work in the service followed that of other years with the expected increase in numbers of patients seen.
Distribution of Students by Faculty, Year, Sex and Full- or Part-time, as at 31 July 1967.

<table>
<thead>
<tr>
<th>Faculty and Year</th>
<th>Full-time</th>
<th></th>
<th></th>
<th>Part-time</th>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
<td>T</td>
<td>M</td>
<td>F</td>
<td>T</td>
<td>M</td>
<td>F</td>
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<td>154</td>
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<td>582</td>
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<td>568</td>
<td>102</td>
<td>77</td>
<td>179</td>
<td>335</td>
<td>412</td>
<td>747</td>
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<tr>
<td>III</td>
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<td>1348</td>
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<td>365</td>
<td>121</td>
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<tr>
<td>Total Eco. &amp; Pol.</td>
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<td></td>
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<td>622</td>
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<td></td>
<td>622</td>
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<td>58</td>
<td></td>
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<td>Total Science</td>
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<td>69</td>
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<td>1569</td>
<td>5327</td>
<td>647</td>
<td>326</td>
<td>973</td>
<td>4405</td>
<td>1895</td>
<td>6300</td>
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<td>Adjustment for students enrolled in more than one course</td>
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<td>16</td>
<td>112</td>
<td>6</td>
<td>102</td>
<td>16</td>
<td>118</td>
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<tr>
<td>Net total Undergraduates</td>
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<td>1553</td>
<td>5215</td>
<td>641</td>
<td>326</td>
<td>967</td>
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<td>25</td>
<td>70</td>
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<td>Bachelor</td>
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<td>56</td>
<td>16</td>
<td>72</td>
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<td>141</td>
<td>278</td>
<td>101</td>
<td>41</td>
<td>142</td>
<td>238</td>
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<td>Graduate Master</td>
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<td>110</td>
<td>191</td>
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<td>130</td>
<td>34</td>
<td>164</td>
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<td>Miscellaneous</td>
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<tr>
<td>Total All Students</td>
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<td>1754</td>
<td>5804</td>
<td>897</td>
<td>419</td>
<td>1316</td>
<td>4947</td>
<td>2173</td>
<td>7120</td>
</tr>
</tbody>
</table>
In May 1967 first year students were examined as usual by the doctors of the School Medical Service of the Victorian Department of Health. In 1968 it is intended to replace the examination with a health questionnaire to be completed as part of enrolment procedure. These questionnaires will be studied by the doctors in the health service and selected students invited to attend for interview. It is hoped that, by this means, some health information will be available to us about all students. The situation will be reviewed from year to year.

10,581 visits were made to the service in 1967. In addition all third year medical students were inoculated against tetanus, poliomyelitis and diphtheria, and vaccinated against smallpox and tuberculosis prior to commencing their clinical work at the various hospitals. Immunization against tetanus and poliomyelitis is done for any person on the campus on a voluntary basis, as are the various immunization procedures required before travelling overseas.

Lectures on emergency first aid were continued for selected members of the University staff during 1967.

Dr. D. F. Buckle joined the health service in November 1967 as a consultant psychiatrist on a sessional basis of one half day a week. This has brought our staff members to five.

Careers and Appointments

At the end of 1967 there were 557 (388 men and 169 women) registered with the careers and appointments office as seeking employment. Slightly more than ten per cent of these were graduates of earlier years seeking to change their jobs.

In most areas there have been no indications of a shortage of jobs, though in some cases graduates have been disappointed to find that a degree by itself is not necessarily a vocational qualification. Efforts are continuing to provide information and guidance which will assist potential graduates to acquire a realistic understanding of the various factors which will affect the development of their careers.

The demand for vacation work and for part-time jobs has continued to rise. The office has been able to establish very satisfactory relationships with many employers, particularly with some located near the University, and most students were able to find satisfactory employment. The office makes special efforts to place individual students in part-time jobs only when it is convinced that the income from such work is essential for the continuance of courses.

The careers and appointments office once again undertook the publication of the Graduate Careers Directory on behalf of all Australian universities. The work involved in this project made it necessary for other activities to be slightly restricted. A more satisfactory arrangement has been made for publication of the 1968 edition, and it seems certain that a permanent organization to be known as the
Australian Graduate Careers Council will assume responsibility for future directories and for other related projects.

Some investigations have been undertaken to provide data on the first jobs accepted by Monash graduates. It is hoped to publish the results of the first survey, covering graduates to 1968, later this year and to produce supplementary information each year thereafter. It is also hoped to carry out follow-up surveys designed to trace the movement of graduates during the first few years after graduation and to determine factors which contribute to occupational restlessness and career disappointment.

**Student Counselling**

The demand for counselling services is still growing at a faster pace than the growth of the University as a whole. 11.7 per cent of the student population consulted the service, as against 10.8 per cent in 1966. Among the range of problems reported by students, the rapidly increasing prominence of difficulties resulting from financial hardships is of some concern.

A transition conference similar in essentials to the one conducted in the previous two years was again held in the May vacation; 128 students and thirty-two members of staff participated. The venture was quite successful.

Experimental activity with group counselling is proceeding.

**Bookshop**

The Monash University bookshop continued to expand its volume of business during 1967, and its premises were enlarged and modified to a limited extent in order to cope with the increase. Shortage of space, however, remains a problem.

The combination of textbooks, non-prescribed academic books and books of a general nature, together with gramophone records and art prints, continues to be very acceptable to the shop's customers. The policy of maintaining this balance is seen as fulfilling the University's desire for a first-rate bookshop at Monash. Six book launchings and a number of poetry readings were also successfully held.

The linked problems of surplus stock and insufficient liquidity were prominent during the year, leading to a mid-year sale which was popular with customers but painful for the shop. More disturbing was the seemingly extensive pilfering suggested by the September stock-take, against which immediate measures were taken. The loss on the year's trading produced by these factors caused serious concern. Very considerable time and effort were spent in a detailed analysis of the background to these factors and new policies were put into operation with regard to liaison with teaching departments, handbook booklists, estimates of student enrolments, bookshop security and staff management in order to produce a more satisfactory financial result while
maintaining and improving the bookshop's service to the needs of the University.

Religious Centre

During 1967 the temporary Religious Centre was in daily use for religious services of the various denominations, discussion groups and interdenominational activities. Sunday services were of particular value to students resident in the University, and the chaplains report an increasing amount of pastoral work. Some student camps were also held.

An appeal by the churches for funds to build the permanent Religious Centre received good support and building will be completed in 1968.

8. STUDENT ACTIVITIES

More than in any previous year, the Union fulfilled the function of being the focal point of student activity. From early morning to late at night, the Central Union building was open, while the Sports Centre operated seven days a week, sixteen hours a day. The Hargrave cafeteria could scarcely cope with its clientele of law, science and engineering students. The Alpine Lodge, in its first year of operation, was full to capacity every weekend of the snow season.

During the latter part of the year, the deputy warden, Mr. D. R. Ellis, visited a number of overseas universities to study current developments in Union buildings and activity programmes.

The Students' Representative Council showed concern with a great number of issues through the year. A very successful teach-in on Vietnam was held at which the speakers included a Monash student, Mr. John Price, who had been sent to Vietnam for ten days from funds contributed by staff and students; the Honourable M. Fraser (Minister for the Army), Mr. E. G. Whitlam (Leader of the Opposition), Mr. G. Fairbairn, Mr. B. A. Santamaria, Professor C. P. Fitzgerald, Professor P. S. Provost, Professor J. D. Legge and Mr. M. Salmon.

Of the new clubs and societies formed this year, perhaps the most significant was the Social Involvement Group whose aims are directed at improving, by the direct efforts of its members, the lot of some of the less fortunate members of our society. A number of joint club activities took place, of which the largest by far was International Week, a project designed to focus attention on cultural aspects of the many countries now represented by strong communities in Australia. The year saw an extension of the previously established tuition and coaching schemes in yoga, ballroom and modern dancing, reel and strathspey, several Asian languages, and art and pottery. Arrangements were made for tuition in effective speaking and in singing and piano to be available on the campus.
Monash had its most successful intervarsity sporting results to date, winning cross country, men's badminton, men's golf, men's judo, sculling, men's and women's squash, and skiing; an equal first was obtained in women's international rules basketball and there were several outstanding performances in boxing and weightlifting. Seven Monash students were in the Australian team of twenty-two which competed in the Universiade—the World Student Games—held in Tokyo from 22 August to 4 September.

In local competition, the Rugby Union and Australian Rules teams earned hard-won promotion to A and B grade divisions. A number of other teams finished either first or second in their respective grades of competition.

Monash was narrowly defeated for the Marshall Trophy presented by the late Professor A. J. Marshall for competition in a wide range of sports between the Victorian universities.

Interfaculty and other matches were played on Wednesday afternoons and full advantage of this period was taken by an increasing number of students.

The sports medicine clinic treated over 200 injured sportsmen and contributed materially to minimizing the time which they spent in recovery.

Casual use of sporting and recreational facilities was greater than ever before, particularly in squash. The availability of individual coaching in a number of different sports enabled many members to overcome the barrier between interest in a sport and the development of sufficient ability to enable them to achieve effective participation with others.

9. FINANCE

Funds for expenditure on recurrent purposes during the year ended 31 December 1967 were available from the following sources:

<table>
<thead>
<tr>
<th></th>
<th>Teaching Halls of</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Totals</td>
</tr>
<tr>
<td>State Government Grant</td>
<td>5,560</td>
</tr>
<tr>
<td>Academic Fees</td>
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</tr>
<tr>
<td>Commonwealth Government Grant</td>
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</tr>
<tr>
<td></td>
<td>11,495</td>
</tr>
</tbody>
</table>

The legislative sanction for the Commonwealth contribution is contained in the Universities (Financial Assistance) Act No. 90 of
1966 as amended by Act No. 107 of 1967. These amounts include the funds required to pay increases in academic salaries effective from 1 July 1967.

Government funds available for expenditure on non-recurrent purposes during the 1967-69 triennium are as follows:

(1) *State and Commonwealth*—

<table>
<thead>
<tr>
<th>Buildings, Equipment and Furniture—</th>
<th>$000</th>
</tr>
</thead>
<tbody>
<tr>
<td>On University site, other than Halls of Residence and Affiliated Colleges</td>
<td>9,500</td>
</tr>
<tr>
<td>Halls of Residence</td>
<td>960</td>
</tr>
<tr>
<td>Affiliated Colleges</td>
<td>2,172</td>
</tr>
<tr>
<td>Teaching Hospitals</td>
<td>1,347</td>
</tr>
<tr>
<td>Computing Facilities</td>
<td>160</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14,139</strong></td>
</tr>
</tbody>
</table>

The legislative sanction for the Commonwealth portion of each of these amounts (i.e., one-half) is contained in the Universities (Financial Assistance) Act No. 90 of 1966.

(2) *State only*—

AUC special research grants for use in the training of graduate students have been set at $270,000 for this triennium.

(3) *Commonwealth only*—

Annual grants for expenditure on specific research projects are made available by the Australian Research Grants Committee. The amount was $276,324 for 1967 and $223,532 for 1968.

In addition to the above amounts voted direct from Government sources, the sum of $245,424 was received in 1967 from Government-financed bodies for the conduct of specific research projects and for the support of postgraduate students. Institutions coming within this category include the National Health and Medical Research Council, the Commonwealth Scientific and Industrial Research Organization and Commonwealth Advisory Committee on Advanced Education.

Funds continued to be received for the appeals for the Religious Centre and Great Hall, 1967 being the major effort for the Religious Centre appeal.

A summary of the table of fees payable by students enrolled for the year 1967 is set out hereunder.

*Academic Fees*—

Undergraduate courses : full-time $372 per annum
Postgraduate courses:

- Master:
  - full-time: $132 per annum
  - part-time: $66 per annum for first two years and $15 per annum thereafter

- Doctor of Philosophy:
  - full-time: $90 per annum
  - Higher Doctorate:
  - full-time: $165

Union Fees:

- Students studying on campus:
  - full-time: $45 per annum
  - part-time: $30 per annum

- Students studying off campus:
  - full-time: $15 per annum

The University's accounts for the year 1967 are appended to this Report.

10. GIFTS AND DONATIONS

The following grants and gifts were received by the University:

- $57,300 from the National Health and Medical Research Council for research as follows:
  - $9,460 to Professor R. C. Nairn (Pathology)
  - $9,320 to Professor E. C. Wood (Obstetrics and Gynaecology)
  - $8,500 to Professor A. W. Linnane (Biochemistry)
  - $6,180 to Professor A. K. McIntyre (Physiology)
  - $4,500 to Professor J. Bornstein (Biochemistry)
  - $4,400 to Professor G. C. Schofield (Anatomy)
  - $4,050 to Dr. J. H. Marshall (Microbiology)
  - $3,690 to Dr. D. A. Lowther (Biochemistry)
  - $3,000 to Dr. M. E. Holman (Physiology)
  - $3,000 to Dr. J. M. Watts (Surgery)
  - $1,200 to Professor R. H. Day (Psychology).

- $40,160 from the Wellcome Trust to the department of Physiology for the purchase of equipment for neurophysiological research.

- $36,558 from the National Heart Foundation of Australia for research as follows:
  - $6,300 to Dr. K. J. Catt (Medicine)
  - $5,670 to Dr. M. E. Holman (Physiology)
  - $5,318 to Associate Professor K. H. McLean (Medicine)
  - $5,245 to Dr. C. L. Gibbs (Physiology)
  - $3,800 to Dr. L. Austin (Biochemistry)
  - $3,625 to Dr. L. B. Geffen (Physiology)
  - $3,600 to Dr. D. A. Lowther (Biochemistry)
  - $3,000 to Dr. G. A. Bentley (Physiology).

- $34,266 from the Reserve Bank of Australia to the department of Anatomy for the purchase of an electron microscope plus attachments and installation costs.
$22,000 from the trustees of the William Buckland Foundation as follows:
  $12,000 for the installation of closed circuit equipment in the circular lecture theatre block.
  $10,000 for equipment in the Alexander Theatre.
$19,285 from the Advisory Committee on Advanced Education (Work Committee) to Professor S. S. Dunn and Professor P. Fensham (Education).
$19,150 from the Anti-Cancer Council of Victoria for research as follows:
  $7,975 to Professor R. C. Nairn (Pathology)
  $6,140 to Dr. K. J. Catt (Medicine)
  $4,035 to Associate Professor W. G. R. M. de Boer (Pathology)
  $1,000 to Dr. T. Ghose (Pathology).
$11,092 from the Australian Meat Research Committee for research as follows:
  $6,232 to Professor J. M. Swan (Chemistry) for his research, "The synthesis of new acaricides and anthelmintics".
  $4,860 to Dr. D. A. Lowther (Biochemistry) for research into the "Structure and biosynthesis of connective tissue".
$8,956.38 from the United States Public Health Service as follows:
  $6,710.81 to Dr. J. McD. Armstrong (Biochemistry) for studies related to the structure and mechanism of action of pituitary polypeptides derived from growth hormone.
  $2,245.57 to Dr. R. A. Westerman (Physiology) for his research project, "Regeneration of olfactory pathways in teleosts".
$8,778 from the Asthma Foundation of Victoria to Associate Professor K. H. McLean (Medicine).
$8,000 from the Australian Wool Board Research Fund for projects as follows:
  $5,400 to department of Biochemistry for "Investigations into the biosynthesis and structure of proteins with particular emphasis on fibrillar proteins".
  $2,600 to department of Chemistry for "Studies on the chemistry of some transition elements important to sheep nutrition".
$7,151 from the Wheat Industry Research Council to Dr. A. Holland (Botany) for his project, "The application of immunofluorescent staining of ophiobolus graminis to studies in the ecology of soil microorganisms".
$7,100 from the Australian Atomic Energy Commission to Dr. A. Williams (Mechanical Engineering) for research into "Heat transfer across surfaces in contact".
$6,935.59 from Merck, Sharp and Dohme Pty. Ltd. as follows:
  $3,963.20 to Professor J. M. Swan (Chemistry) for studies on the design and synthesis of compounds with possible anthelmintic activity.
$2,972.39 to Professor J. Bornstein (Biochemistry) for studies related to the structure and mechanism of action of pituitary polypeptides derived from growth hormone.

$5,700 from the Rural Credits Development Fund of the Reserve Bank of Australia to Dr. A. Holland (Botany) for the purchase of an environmental chamber.

$5,000 from the Helen Macpherson Schutt Trust.

$4,080 from the Australian Institute of Nuclear Science and Engineering for research in the department of Physics as follows:
  $1,400 to Dr. J. H. Smith
  $800 to Professor R. Street and Dr. G. V. H. Wilson
  $800 to Associate Professor W. A. Rachinger
  $680 to Dr. G. V. H. Wilson
  $400 to Mr. Gordon Troup.

$4,000 from the Territory of Papua and New Guinea for research in the faculty of Education as follows:
  $2,500 to Mr. L. Mackay
  $900 to Dr. J. Cleverley
  $600 to Miss M. C. Nixon.

$3,500 from the Australian Welding Research Association to Mr. R. Macpherson (Civil Engineering) for a project "Stress relaxation processes".

$3,000 from the Felton Bequest to Professor E. C. Wood (Obstetrics and Gynaecology) towards the purchase of an automatic blood pressure recorder.

$2,750 from the Radio Research Board for research in the department of Physics.

$2,600 from the George Hicks Foundation for a postgraduate scholarship in the department of Chemistry.

$2,000 from the Patrick Brennan Estate as follows:
  $1,000 to the faculty of Medicine
  $1,000 to the department of Medicine for the purchase of a time injector unit.

$2,000 from the H. & L. Hecht Trust.

$2,000 over two years from the Myer Emporium Ltd. for graduate work in Japanese.

$1,500 from the estate of the late H. E. Wilms Esq. towards the cost of the Alexander Theatre.

$1,108.65 from Total Oil Products (Australia) Ltd. towards the Australian Journal of French Studies.

$1,000 from the William Angliss Charitable Trust, $500 of which is for the Interdenominational Chaplaincy Fund.

$1,000 from the Electrical Research Board to Professor D. G. Lampard (Electrical Engineering) for a project on electrets.

$1,000 from Control Data Australia Pty. Ltd. to Mrs. Georgette Silva (French) towards the publication of a manual.
$1,000 from the Sir Andrew and Lady Fairley Foundation.
$1,000 from the Monash Parents' Group as follows:
  $800 to the library
  $200 to the University Union.
$800 from the Sherwood Trust towards travel expenses of Dr. A. K. Lee (Zoology).
$700 from Mr. P. G. Hiscock to the Students' Loan Fund Committee.
$600 from Merck, Sharp and Dohme (Australia) Pty. Ltd. for research by Dr. Hugh Niall in the department of Medicine.
$600 from the University of Melbourne for the *Australian Journal of French Studies*.
$600 from the National Bank of Australasia, for the *Australian Journal of French Studies*.
$600 from "The Three R's", St. Nicholas Hospital, Carlton, to Professor E. C. Wood (Obstetrics and Gynaecology) for research.
$500 from Monsanto Chemicals (Aust.) Ltd. to the department of Chemical Engineering.
$500 from the Myer Foundation towards travel expenses of Dr. A. K. Lee (Zoology).
$500 from Repco Ltd. for the award of scholarships to students studying Japanese.
$480 from the Country Roads Board to the department of Economics.
$300 from ICIANZ Ltd. for the award of scholarships to students studying Japanese.
$300 from the Social Science Research Council of Australia to Mr. Prescott Clarke (History) for research on Chinese history.
$250 from Mr. & Mrs. Luke to Mr. J. McK. Watts (Surgery) for liver research.
$200 from Edward Dyason and Co., to Professor S. S. Dunn towards the expenses of a research seminar on "Education for Aborigines".
$200 from the Banque Nationale de Paris, for the *Australian Journal of French Studies*.
$200 from Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques Paris, for the *Australian Journal of French Studies*.
$185 from the Monash Players for equipment in the Alexander Theatre.
$157.50 from John A. Benjamin Esq., of the Eliza Handley Trust, for the purchase of an Allen David painting.
$100 from the estate of the late George Adams Esq., to Professor S. S. Dunn (Education) towards the expenses of a research seminar on "Education for Aborigines".
$100 from the Danks Trust to Professor S. S. Dunn, towards the expenses of a research seminar on "Education for Aborigines".
$100 from La Compagnie Industrielle de Travaux, Australia, for the *Australian Journal of French Studies*.

$100 from Mobil Oil Australia Ltd. to the careers and appointments office.

$100 from Mount Isa Mines Ltd. to the careers and appointments office.

$91.48 from Ugine Kuhlmann, Paris, for the *Australian Journal of French Studies*.

$50.86 from La Societe le Carbone-Lorraine for the *Australian Journal of French Studies*.

$50.86 from the Banque Regionale d’Escompte et de Depots for the *Australian Journal of French Studies*.

$50 from Coats Patons (Aust.) Ltd. for the careers and appointments office.

$50 from S.A.F. Pond Esq., of Messrs. Whiting and Byrne, solicitors, for the law library.

$50 from the Monash Graduates Association for the purchase of supplementary texts in demand.

$50 from Cooper Brothers & Company to the careers and appointments office.

$50 from the Geography Teachers’ Association of Victoria to the Alexander Theatre.

$30 from the Morris Family Trust to Professor S. S. Dunn (Education) towards the expenses of a research seminar on “Education for Aborigines”.

Several thousand brand-new transistors, diodes and other products including a complete range of Zener reference diodes and some high power, high frequency transistors, to the department of Electrical Engineering, from the Texas Instrument Foundation, South Australia.

Three transformers valued at $480 from Mr. J. Wilson, to the department of Electrical Engineering, built to the department’s specification by Wilson Electric Transformer Co. Pty. Ltd.

A Sirius computer and Frieden Sirius coded flexowriter from Imperial Chemical Industries of Australia and New Zealand. In return, the University makes available to ICANZ a Sirius computer facility for up to forty hours per month.

Two woodcuts and an etching by Lionel Lindsay from Sir Daryl Lindsay.

A painting, “Enter the Wombat” by Neil Douglas, from the artist.

The Ford Motor Company of Australia arranged to match gifts by its employees to the University, on a dollar for dollar basis up to a limit of $500 from any one employee in one year.

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 the
Great Hall raised by 31 December 1967 a total of $464,850. Among the donations were many generous ones.

The appeal by the Churches and the Jewish community for the building of the Religious Centre had raised $181,811 by 31 December, and in addition there are many further promises to hand. Donations ranged from collections in individual churches to large gifts.

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

<table>
<thead>
<tr>
<th>Investigator</th>
<th>Title of Project</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marwick, M. G. and Parsler, R.</td>
<td>An analysis of social values of working and middle class families</td>
<td>$10,700</td>
</tr>
<tr>
<td>Tatz, C. M.</td>
<td>An investigation into the health of the aboriginal community in Victoria</td>
<td>$4,650</td>
</tr>
<tr>
<td>Peterson, J. A.</td>
<td>Climate, periglacial landforms and treelines in south-eastern Australia</td>
<td>$1,316</td>
</tr>
<tr>
<td>Gelber, H. G.</td>
<td>Costs and benefits of the Australian-American alliance in the light of the strategic situation in the Indo-Pacific region</td>
<td>$582</td>
</tr>
<tr>
<td>Hancock, I. R.</td>
<td>British colonial native policies in East Africa 1919-1939</td>
<td>$1,300</td>
</tr>
<tr>
<td>Serle, A. G.</td>
<td>History of Victoria 1850-1900</td>
<td>$1,680</td>
</tr>
<tr>
<td>Mackay, L. D.</td>
<td>The development and testing of procedures for evaluation of physics curricula in secondary schools</td>
<td>$4,500</td>
</tr>
<tr>
<td>Potter, O. E.</td>
<td>Fluidized bed reactors behaviour and design</td>
<td>$4,800</td>
</tr>
<tr>
<td>Boger, D. V.</td>
<td>Heat transfer to viscoelastic fluids</td>
<td>$1,050</td>
</tr>
<tr>
<td>Rozvany, G. I. N.</td>
<td>Minimum volume synthesis of prestressed plates and other floor systems</td>
<td>$4,794</td>
</tr>
<tr>
<td>Lampard, D. G.</td>
<td>A study of information processing in the nervous system using the technique of stochastic stimulation</td>
<td>$10,635</td>
</tr>
<tr>
<td>Melbourne, W. H.</td>
<td>Model scaling of wind effects on structures</td>
<td>$6,033</td>
</tr>
<tr>
<td>Hinwood, J. B.</td>
<td>Turbulence in stratified fluids</td>
<td>$1,080</td>
</tr>
<tr>
<td>Linnane, A. W.</td>
<td>In vivo effect of antibiotics on mammalian tissues and on human cells in tissue culture</td>
<td>$6,000</td>
</tr>
<tr>
<td>Linnane, A. W., Lukins, H. B., and Stewart, P. R.</td>
<td>Biogenesis of mitochondria</td>
<td>$4,978</td>
</tr>
<tr>
<td>Austin, L.</td>
<td>The origin of axonal protein</td>
<td>$3,585</td>
</tr>
<tr>
<td>Investigator</td>
<td>Title of Project</td>
<td>Amount ($)</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Lowther, D. A.</td>
<td>Factors involved in the maintenance of cartilage structure</td>
<td>4,140</td>
</tr>
<tr>
<td>Lowther, D. A. and Preston, B. N.</td>
<td>Structural aspects of connective tissue</td>
<td>1,150</td>
</tr>
<tr>
<td>Nairn, R. C.</td>
<td>Immunological studies of biological specificity</td>
<td>4,700</td>
</tr>
<tr>
<td>Marshall, J. H.</td>
<td>Physiology of pigment formation by Staphylococci</td>
<td>4,480</td>
</tr>
<tr>
<td>Holman, M. E.</td>
<td>Biophysical studies on smooth muscle</td>
<td>8,181</td>
</tr>
<tr>
<td>McDonald, I. R. and Weiss, M.</td>
<td>Adrenal function in monotremes and marsupials</td>
<td>2,000</td>
</tr>
<tr>
<td>Mark, R. F.</td>
<td>Behavioural and electro-physiological study of visual memory in fish</td>
<td>1,950</td>
</tr>
<tr>
<td>Woolley, G.</td>
<td>Mechanisms of pulsatile lymph flow</td>
<td>3,335</td>
</tr>
<tr>
<td>Canny, M. J. P.</td>
<td>Physiological and structural studies of phloem</td>
<td>2,821</td>
</tr>
<tr>
<td>O’Brien, T. P.</td>
<td>Cell biology of grasses, with special emphasis on cereals</td>
<td>3,807</td>
</tr>
<tr>
<td>Brown, R. D.</td>
<td>Study of short-lived species by microwave spectroscopy</td>
<td>24,038</td>
</tr>
<tr>
<td>Swan, J. M.</td>
<td>Design and synthesis of new organic compounds having potential therapeutic value</td>
<td>24,945</td>
</tr>
<tr>
<td>West, B. O.</td>
<td>Some chloro and fluoro substituted organometallic compounds</td>
<td>16,545</td>
</tr>
<tr>
<td>Coller, B. A. W.</td>
<td>Rate studies of the halogenation of electron-rich heteroaromatic molecules</td>
<td>1,123</td>
</tr>
<tr>
<td>Deacon, G. B.</td>
<td>Studies in organometallic and co-ordination chemistry</td>
<td>2,000</td>
</tr>
<tr>
<td>Dickson, R. S.</td>
<td>Substituent effects in organometallic chemistry</td>
<td>1,600</td>
</tr>
<tr>
<td>Gatehouse, M. K. C.</td>
<td>Crystal chemistry of the solid state</td>
<td>3,642</td>
</tr>
<tr>
<td>Morton, B. R.</td>
<td>Source and sink flows in stratified fluids</td>
<td>2,625</td>
</tr>
<tr>
<td>Street, R. and Wilson, G. V. H.</td>
<td>Studies of magnetic materials at low temperatures in high magnetic fields</td>
<td>19,800</td>
</tr>
<tr>
<td>McLaren, A. C.</td>
<td>Observation and identification of crystal defects. Their role in the mechanisms of crystallization and deformation of minerals and rocks</td>
<td>12,700</td>
</tr>
<tr>
<td>Troup, G. J. F.</td>
<td>Studies in quantum electronics</td>
<td>6,675</td>
</tr>
<tr>
<td>Day, R. H. and Webster, W. R.</td>
<td>The physiological basis of attentional mechanisms</td>
<td>4,897</td>
</tr>
</tbody>
</table>
Investigator | Title of Project | Amount
---|---|---
Perriment, A. D. | Response to information from bisensory signals | $10,400
Dorward, D. F. | Breeding biology and behaviour of the Cape Barren goose *cereopsis novae-hollandiae* | $1,050
Ettershank, G. | Microclimate regulation in desert ant nests | $2,100
Nelson, J. E. | Comparative physiology, ecology and behaviour of the two native cats *dasyurus viverrinus* and *satanellus hallucatus* | $1,690

11. PUBLICATIONS

FACULTY OF ARTS

*Department of Anthropology and Sociology*


**Coy, P. E. B.** — The Indians of Mexico in Latin America, ed. Claudio Veliz, Anthony Blond, 1967.


Department of Classical Studies


Department of English


MORGAN, MARGERY M. — Introduction to G. B. Shaw, You Never Can Tell. Hicks Smith & Sons, 7-32.

MUECKE, D. C. — Beauty and Mr. B. *Studies in English Literature*, VII, 2, 467-74, 1967.


**Department of Geography**


JOHNSON, B. L. C. — "Iron to 1750" (pp. 108-120) and "Fire Clay" (pp. 269-272) in Victoria County History of Stafford, Volume II, Oxford University Press, 1967.


POWELL, J. M. — Western Victoria, Longmans Australian Geographies.


Department of History

GREEN, L. F. — Entry on MACDOWELL, Edward and Thomas. *Australian Dictionary of Biography*, II.
INGHAM, S. M. — A foot-note to transportation to N.S.W. *Historical Studies Australia and New Zealand*, XII, No. 48, April 1967.

Department of Modern Languages

French


German


Indonesian and Malay Section


IDRUS — Tramlijn Stad Harmoni (23-28) and Verhaal van een korte Broek (29-32), in Moderne Indonesische Verhalen, ed. Professor A. Teeuw — Leyden, Polak & van Gennep, Amsterdam, 1967.

Japanese


Linguistics


Department of Music


MOYLE, A. M. — Songs from the Northern Territory, Companion Booklet for five 12" L.P. discs (Cat. No. I.A.S. M-001/5), including maps, songtexts and music notations, Australian Institute of Aboriginal Studies.

MOYLE, A. M. — (Comp.) Australian aboriginal music. Bibliography and discography, in Musicology, Journal of the Musicological Society of Australia, II.

Department of Philosophy


FACULTY OF ECONOMICS AND POLITICS

Department of Economics


Department of Politics


Faculty of Education


Morey, E. A. — The adolescent spastic becomes an adult. Proceedings of the 8th Medical and Educational Conference of the Australian Cerebral Palsy Association.


Dean of the faculty of Engineering


Department of Chemical Engineering


Department of Civil Engineering


Department of Electrical Engineering


Department of Mechanical Engineering


FACULTY OF LAW


DERHAM, D. P. — The nature of the university and its requirements as affecting education for the professions. The Role of the University in Preparation for the Professions, The University of New South Wales, 10-19, 1967.


FACULTY OF MEDICINE

Dean's Department


Department of Anatomy


Wilson, A. S. — The electron microscope — an aid to quantitative studies on peripheral nervous system. *Impulse*, 6, No. 6, 2, 1967.


Department of Biochemistry


Department of Medicine


Department of Microbiology


Department of Obstetrics and Gynaecology


Department of Paediatrics


Department of Pathology


**Department of Physiology**


Department of Surgery


Visitation of the General Medical Council to the Monash Medical School, 30 November—1 December 1966. (Faculty publication.)

**FACULTY OF SCIENCE**

*Department of Botany*


REPORT OF COUNCIL

Department of Chemistry


**Department of Mathematics**


**Department of Physics**


Department of Psychology


Perriment, A. D.—Human engineering (part 1). The Professional Engineer, 21, No. 3, 8-9, 1967.

Perriment, A. D.—Human engineering (part 2). The Professional Engineer, 21, No. 5, 10-11, 1967.


Department of Zoology and Comparative Physiology


For and on behalf of the Council,

R. R. BLACKWOOD
Chancellor
The audited accounts of the University for the year 1967 follow this introduction, in which the salient features are set out for ready reference.

1. Capital Funds
Since the incorporation of Monash University on May 30, 1958, the following funds have been provided for the acquisition of physical facilities of a permanent nature:

<table>
<thead>
<tr>
<th></th>
<th>$000</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Government Grants</td>
<td>18,132</td>
<td>50·4</td>
</tr>
<tr>
<td>Commonwealth Government Grants</td>
<td>17,822</td>
<td>49·6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35,954</strong></td>
<td><strong>100·0</strong></td>
</tr>
</tbody>
</table>

These funds have been expended as follows:

<table>
<thead>
<tr>
<th></th>
<th>$000</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>480</td>
<td>1·4</td>
</tr>
<tr>
<td>Site Development</td>
<td>2,459</td>
<td>7·0</td>
</tr>
<tr>
<td>Buildings</td>
<td>28,287</td>
<td>80·7</td>
</tr>
<tr>
<td>Furniture</td>
<td>1,400</td>
<td>4·0</td>
</tr>
<tr>
<td>Equipment</td>
<td>1,356</td>
<td>3·9</td>
</tr>
<tr>
<td>Research Projects (mainly Equipment)</td>
<td>1,074</td>
<td>3·0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>35,056</strong></td>
<td><strong>100·0</strong></td>
</tr>
</tbody>
</table>

At the balance date funds for building and research projects totalling $897,900 were held for the purpose of meeting commitments in relation to building contracts and the supply of equipment.

2. Recurrent Funds
A brief summary of the income and expenditure for recurrent purposes of the University for the year ended December 31, 1967, is given hereunder:

<table>
<thead>
<tr>
<th></th>
<th>$000</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Government Grants</td>
<td>5,510</td>
<td>48·4</td>
</tr>
<tr>
<td>Commonwealth Government Grants</td>
<td>3,995</td>
<td>35·1</td>
</tr>
<tr>
<td>Academic Fees</td>
<td>1,880</td>
<td>16·5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11,385</strong></td>
<td><strong>100·0</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>$000</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching and Research</td>
<td>8,006</td>
<td>70·7</td>
</tr>
<tr>
<td>Libraries</td>
<td>855</td>
<td>7·6</td>
</tr>
<tr>
<td>Administration</td>
<td>1,322</td>
<td>11·7</td>
</tr>
<tr>
<td>Buildings and Grounds</td>
<td>883</td>
<td>7·8</td>
</tr>
<tr>
<td>Other</td>
<td>251</td>
<td>2·2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11,317</strong></td>
<td><strong>100·0</strong></td>
</tr>
</tbody>
</table>

The amount of $68,198, being the portion of the year's income unspent at December 31, 1967, was held for the purpose of meeting commitments for materials and services which were on order at the balance date.

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

**I. STATEMENT SHOWING INCOME AND EXPENDITURE FOR ALL PURPOSES**

**YEAR ENDED DECEMBER 31, 1967**

<table>
<thead>
<tr>
<th></th>
<th>DIRECT GOVERNMENT GRANTS</th>
<th>INDIRECT GOVERNMENT GRANTS AND OTHER FUNDS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Recurrent</td>
<td>Recurrent (Teaching)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Buildings, Equipment and Furniture</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$</td>
<td>$(Teaching)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research Projects</td>
<td>Equipment Grants</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Buildings, Equipment</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>and Furniture</td>
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<td></td>
<td>$</td>
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<td>Research Projects</td>
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<td></td>
<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grants and Donations</td>
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<td>$</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Union Development</td>
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<td></td>
<td>Other Items</td>
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<tr>
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<td>$</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>INCOME—</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>State Government Grants:</td>
<td></td>
<td></td>
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<tr>
<td>Received this year</td>
<td>5,509,622</td>
<td>90,000</td>
<td>800,000</td>
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<tr>
<td>Add Accrual at December 31, 1967</td>
<td>385,000</td>
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<tr>
<td>Commonwealth Government Grants:</td>
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<tr>
<td>Received this year</td>
<td>3,881,000</td>
<td>277,361</td>
<td>1,245,000</td>
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<tr>
<td>Add Accrual at December 31, 1967</td>
<td>114,000</td>
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<td>19,947</td>
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<td>Deduct Accrual at January 1, 1967</td>
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<td>25,131 Dr.</td>
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<td>Academic Fees</td>
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<td>Fees for Special Short Courses</td>
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<td>Union:</td>
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<tr>
<td>Fees</td>
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<td></td>
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<tr>
<td>Other Income</td>
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<td>Union Development Fees</td>
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<td>Grants and Donations:</td>
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<td>Government-financed Bodies</td>
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<td>Other</td>
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<td>Appeals:</td>
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<td>Great Hall</td>
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<td>Religious Centre</td>
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<td>Outside Earnings</td>
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<tr>
<td><strong>TOTAL INCOME</strong></td>
<td>11,384,471</td>
<td>367,361</td>
<td>2,370,000</td>
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<td>DIRECT GOVERNMENT GRANTS</td>
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<tr>
<td></td>
<td>Recurrent</td>
<td>Research Projects</td>
<td>Buildings, Equipment</td>
</tr>
<tr>
<td></td>
<td>Build and Furniture</td>
<td>(Teaching)</td>
<td>and Furniture Hospitals</td>
</tr>
<tr>
<td></td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Teaching and Research:</td>
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<td>5,467,606</td>
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<td>30,920</td>
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<td>201,672</td>
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<td>Research Scholarships and Fellowships</td>
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<td>New Appointments</td>
<td>102,093</td>
<td>9,498</td>
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<td>Other</td>
<td>287,990</td>
<td>9,498</td>
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<td>Books, Journals and Binding</td>
<td>399,181</td>
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<td>Equipment and Furniture</td>
<td>10,396</td>
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<td>Other</td>
<td>43,563</td>
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<td>Salaries</td>
<td>815,351</td>
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<td>Superannuation</td>
<td>61,472</td>
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<tr>
<td>Postage, Telephone and Advertising</td>
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<td>Equipment</td>
<td>30,580</td>
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<tr>
<td>Other</td>
<td>269,001</td>
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<tr>
<td>Forward:</td>
<td>10,178,998</td>
<td>373,259</td>
<td>232,592</td>
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**FINANCIAL STATEMENTS**

87
### DIRECT GOVERNMENT GRANTS

<table>
<thead>
<tr>
<th></th>
<th>Recurrent Projects</th>
<th>Ends of Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buildings, Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and Furniture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recurrent (Teaching)</td>
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<td></td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>and Furniture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitals</td>
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</tbody>
</table>

#### Buildings and Grounds:
- Construction of New Buildings
- Site Development
- Purchase of Land and Buildings
- Repairs and General Maintenance
- Furniture and Furnishings
- Rents, Rates, Power, Lighting, Heating
- Equipment
- Sale of Land
- Other

#### Sundry Expenditure:
- Union Activities
- Student Services
- Audio-Visual Aids
- Scholarships and Prizes
- Halls of Residence
- Owned Houses and Transit Flats
- University Bookshop
- Alexander Theatre
- Expenditure re Outside Earnings
- Appeals:
  - Great Hall
  - Religious Centre
  - Other

#### Inter-Fund Transfers

<table>
<thead>
<tr>
<th>TOTAL EXPENDITURE</th>
<th>$ 11,316,273</th>
<th>373,777</th>
<th>2,230,033</th>
<th>78,600</th>
<th>318,011</th>
<th>577,228</th>
<th>55,756 Cr.</th>
<th>328,292</th>
<th>15,166,458</th>
</tr>
</thead>
</table>

### INDIRECT GOVERNMENT GRANTS AND OTHER FUNDS

<table>
<thead>
<tr>
<th></th>
<th>Recurrent Projects</th>
<th>Ends of Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grants and Donations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Union Development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Items</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Buildings and Grounds:
- Construction of New Buildings
- Site Development
- Purchase of Land and Buildings
- Repairs and General Maintenance
- Furniture and Furnishings
- Rents, Rates, Power, Lighting, Heating
- Equipment
- Sale of Land
- Other

#### Sundry Expenditure:
- Union Activities
- Student Services
- Audio-Visual Aids
- Scholarships and Prizes
- Halls of Residence
- Owned Houses and Transit Flats
- University Bookshop
- Alexander Theatre
- Expenditure re Outside Earnings
- Appeals:
  - Great Hall
  - Religious Centre
  - Other

#### Inter-Fund Transfers

<table>
<thead>
<tr>
<th>TOTAL EXPENDITURE</th>
<th>$ 11,301,510</th>
<th>373,777</th>
<th>2,230,033</th>
<th>82,155</th>
<th>421,110</th>
<th>2,541</th>
<th>$ 11,301,510</th>
</tr>
</thead>
</table>

### STATE OF FUNDS—

<table>
<thead>
<tr>
<th>Balance, January 1, 1967</th>
<th>$ 1,054,794 Cr.</th>
<th>156,225 Cr.</th>
<th>277,692 Cr.</th>
<th>37,690 Cr.</th>
<th>627,911 Cr.</th>
<th>30,576</th>
<th>455</th>
<th>324</th>
<th>$ 2,188,794</th>
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<tbody>
<tr>
<td>Inter-Fund Transfer</td>
<td>373,777</td>
<td>2,230,033</td>
<td>78,600</td>
<td>318,011</td>
<td>577,228</td>
<td>55,756 Cr.</td>
<td>328,292</td>
<td>15,166,458</td>
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</tr>
<tr>
<td>Balance, December 31, 1967</td>
<td>1,122,992 Cr.</td>
<td>149,809 Cr.</td>
<td>455,349 Cr.</td>
<td>10,855</td>
<td>292,742 Cr.</td>
<td>2,836,331 Cr.</td>
<td>207,227 Dr.</td>
<td>123,716 Cr.</td>
<td>280,849</td>
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</table>
# Statement of Source and Application of Funds

<table>
<thead>
<tr>
<th>Sources</th>
<th>1958-65</th>
<th>1966</th>
<th>1967</th>
<th>Progressive Totals to 31/12/1967</th>
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<tbody>
<tr>
<td><strong>SOURCES</strong></td>
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<td></td>
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<tr>
<td>(1) State Government Grants:</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Recurrent—</td>
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<td></td>
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<tr>
<td>General</td>
<td>11,750,914</td>
<td>4,832,748</td>
<td>5,509,622</td>
<td>22,093,284</td>
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<td>Teaching Hospitals</td>
<td>14,592</td>
<td>32,006</td>
<td>51,021</td>
<td>97,619</td>
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<tr>
<td>Site, Buildings, Equipment and Furniture—</td>
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<td></td>
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<tr>
<td>General</td>
<td>14,342,038</td>
<td>860,000</td>
<td>1,185,000</td>
<td>16,387,038</td>
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<tr>
<td>Teaching Hospitals</td>
<td>832,200</td>
<td>384,600</td>
<td>10,266</td>
<td>1,227,066</td>
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<tr>
<td>Research Projects</td>
<td>196,000</td>
<td>232,311</td>
<td>90,000</td>
<td>518,311</td>
</tr>
<tr>
<td><strong>Total State Government</strong></td>
<td>27,135,744</td>
<td>6,341,665</td>
<td>6,845,909</td>
<td>40,323,318</td>
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<td>(2) Commonwealth Government Grants:</td>
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</tr>
<tr>
<td>Recurrent—</td>
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<tr>
<td>General</td>
<td>7,277,500</td>
<td>3,358,000</td>
<td>3,995,000</td>
<td>14,630,500</td>
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<tr>
<td>Teaching Hospitals</td>
<td>7,888</td>
<td>17,243</td>
<td>27,579</td>
<td>52,710</td>
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<tr>
<td>Site, Buildings, Equipment and Furniture—</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>13,844,600</td>
<td>860,000</td>
<td>1,185,000</td>
<td>15,889,600</td>
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<tr>
<td>Teaching Hospitals</td>
<td>832,200</td>
<td>384,600</td>
<td>10,266</td>
<td>1,227,066</td>
</tr>
<tr>
<td>Research Projects</td>
<td>196,000</td>
<td>232,311</td>
<td>90,000</td>
<td>518,311</td>
</tr>
<tr>
<td><strong>Total Commonwealth Government</strong></td>
<td>22,158,188</td>
<td>4,852,154</td>
<td>5,495,206</td>
<td>32,505,548</td>
</tr>
<tr>
<td>Total Government:</td>
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<td>11,193,819</td>
<td>12,341,115</td>
<td>72,828,866</td>
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<td>(3) Academic Fees and Fees for Special Short Courses</td>
<td>2,029,332</td>
<td>1,380,692</td>
<td>1,884,854</td>
<td>5,294,878</td>
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<td>(4) Union:</td>
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<td>Fees</td>
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<td>144,762</td>
<td>198,667</td>
<td>586,555</td>
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<td>11,774</td>
<td>18,124</td>
<td>34,156</td>
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<td>(5) Grants and Donations, including Appeals</td>
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<td>708,274</td>
<td>663,351</td>
<td>2,673,875</td>
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<td>(6) Union Development</td>
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<td>104,277</td>
<td>144,155</td>
<td>390,230</td>
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<td>(7) Other Income</td>
<td>304,604</td>
<td>96,919</td>
<td>197,041</td>
<td>598,564</td>
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<td><strong>TOTAL FUNDS AVAILABLE</strong></td>
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<td>13,640,517</td>
<td>15,447,307</td>
<td>82,407,124</td>
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<td>(1) Recurrent Purposes:</td>
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<td>Salaries and other operating expenses</td>
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<td>Equipment and Furniture</td>
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<td>Books, Journals and Binding</td>
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<td>$319,559</td>
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<td>Teaching Hospitals—</td>
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<td>(2) Site Acquisition and Development</td>
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<td>(3) Building Funds:</td>
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<td>$232,592</td>
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<td>$122,357</td>
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<td>$1,306,095</td>
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<td>Teaching Hospitals—</td>
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<td>Buildings</td>
<td>$1,526,144</td>
<td>$130,086</td>
<td>$319,082</td>
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<td>$8,221</td>
<td>$11,926 Cr.</td>
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<td>(4) Research Projects</td>
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<td>(5) Grants and Donations, including Appeals:</td>
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<tr>
<td>Salaries and other operating expenses</td>
<td>$522,920</td>
<td>$330,275</td>
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<tr>
<td>Equipment and Furniture</td>
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<td>$49,605</td>
<td>$382,997</td>
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<tr>
<td>Books and Journals</td>
<td>$5,154</td>
<td>$3,927</td>
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<td>Buildings</td>
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<td>(6) Union Development</td>
<td>$423,230</td>
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<td>(7) Other Expenditure</td>
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<tr>
<td>TOTAL FUNDS APPLIED</td>
<td>$51,526,892</td>
<td>$12,877,443</td>
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(III) STATEMENT OF BALANCES AT DECEMBER 31, 1967

<table>
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<tr>
<th>Description</th>
<th>$</th>
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<tbody>
<tr>
<td>Sundry Creditors and Accrued Expenses</td>
<td>924,430</td>
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<td>Loans on Mortgage</td>
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<tr>
<td>State Government Grant Received in Advance</td>
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<td>Direct Government Grants:</td>
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<tr>
<td>Recurrent</td>
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<td>Research</td>
<td>149,809</td>
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<td>Buildings, Equipment and Furniture:</td>
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<tr>
<td>General</td>
<td>455,349</td>
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<tr>
<td>Teaching Hospitals</td>
<td>292,742</td>
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<td>Indirect Government Grants and Other Funds:</td>
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<td>Grants and Donations</td>
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<tr>
<td>Union Development</td>
<td>207,227</td>
</tr>
<tr>
<td>Other Items</td>
<td>123,716</td>
</tr>
<tr>
<td>Total</td>
<td>2,836,331</td>
</tr>
<tr>
<td>Investments:</td>
<td></td>
</tr>
<tr>
<td>Cash on Hand and at Bank</td>
<td>185,792</td>
</tr>
<tr>
<td>Official Short Term Money Market</td>
<td>2,000,000</td>
</tr>
<tr>
<td>Fixed-interest Securities, at lower of par or cost</td>
<td>722,634</td>
</tr>
<tr>
<td>Ordinary Shares, at cost (Market Value: $147,818)</td>
<td>101,504</td>
</tr>
<tr>
<td>Total</td>
<td>2,824,138</td>
</tr>
<tr>
<td>Sundry Debtors:</td>
<td></td>
</tr>
<tr>
<td>Accrued Government Grants</td>
<td>537,813</td>
</tr>
<tr>
<td>Other</td>
<td>295,017</td>
</tr>
<tr>
<td>Total</td>
<td>832,830</td>
</tr>
<tr>
<td>Stock on Hand</td>
<td>263,155</td>
</tr>
<tr>
<td>Payments in Advance</td>
<td>25,527</td>
</tr>
<tr>
<td>Total</td>
<td>4,131,442</td>
</tr>
</tbody>
</table>
(IV) STATEMENT OF RECEIPTS AND PAYMENTS OF TRUST FUNDS
FOR THE YEAR ENDED DECEMBER 31, 1967

Cash at Bank, January 1, 1967 ..... $636

Receipts—
  Interest on Investments ..... 2,739
  Maturity Proceeds:
    Fixed Deposit ..... 1,500
    Investment ..... 200
  ..... 1,700
  ..... 4,439

Payments—
  Hooker Morawetz and Olver Scholarship ..... 1,545
  Bequest from Estate of S. S. McCutcheon ..... 460
  Monash University Rowing Club ..... 50
  The David B. Rosenthal Memorial Trust ..... 50
  D. J. Shing Trust ..... 200
  William and Katherine Winter Foundation ..... 1,740
  ..... 4,045

Cash at Bank, December 31, 1967 ..... 1,030

SCHEDULE OF TRUST FUNDS AT DECEMBER 31, 1967

Inscribed Stock—
  Melbourne and Metropolitan Board of Works ..... 50,000
  State Electricity Commission of Victoria ..... 1,075
  Commonwealth Government ..... 1,000
  ..... 52,075

Current Account—
  Commercial Bank of Australia Limited ..... 1,030
  ..... 53,105
STATEMENT OF INCOME AND EXPENDITURE
FOR YEAR ENDED DECEMBER 31, 1967

$                                           $  
Surplus transferred to Students’ Loan Fund ... 27,109  
State Government Grant ... ... ... ... ... ... ... ... $ 27,000  
Interest on Loans ... ... ... ... ... ... ... ... $ 36  
Other Interest ... ... ... ... ... ... ... ... $ 73  

27,109

BALANCE SHEET AS AT DECEMBER 31, 1967

$                                           $  
Students’ Loan Fund—  
Balance, January 1, 1967 ... ... ... ... ... ... ... ... 20,623  
Surplus for Year ... ... ... ... ... ... ... ... 27,109  
Cash at Bank ... ... ... ... ... ... ... ... $ 2,086  
Loans to Students ... ... ... ... ... ... ... ... $ 29,646  
Fixed Deposit ... ... ... ... ... ... ... ... $ 16,000  

47,732

47,732
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 December 31, 1967, have been audited by an officer acting under my direction.

In my opinion, the statements of accounts herewith numbered (I) to (V) are correct.

A. J. A. GARDNER,
Auditor-General.

28/6/1968.