

## CONTENTS

|                                      |                      |
|--------------------------------------|----------------------|
| PRESIDENT AND BOARD OF REGENTS ..... | 3                    |
| FOREWORD .....                       | 5                    |
| TEACHING .....                       | 7                    |
| RESEARCH .....                       | 14                   |
| FACTS AND FIGURES .....              | (Center Fold Insert) |
| PUBLIC SERVICE AND EDUCATION .....   | 24                   |
| CULTURAL ACTIVITIES .....            | 27                   |
| STUDENT AND ALUMNI ACTIVITY .....    | 32                   |
| NOTABLE EVENTS .....                 | 35                   |

**PRESIDENT**

O. MEREDITH WILSON

**BOARD OF REGENTS**

(on June 30, 1966)

DANIEL C. GAINNEY

BJARNE E. GROTTUM

ALBERT V. HARTL

ROBERT E. HESS

MARJORIE J. HOWARD

(Mrs. C. Edward)

FRED J. HUGHES

LESTER A. MALKERSON

CHARLES W. MAYO, M.D.

WILLIAM K. MONTAGUE

GEORGE RAUENHORST

OTTO A. SILHA

HERMAN F. SKYBERG



## FOREWORD

This report differs from its predecessors in devoting its attention to the activities of the University during the first year of the 1964-1966 biennium as well as the second year. Thus the information found herein becomes more fully a picture of what has been achieved in the period since the issuing of the *President's Report, 1963-1964*.

The biennium that ended June 30, 1966, was a full one, and was indeed the last full one with which I shall be associated. Within these two years, the University's accomplishments in teaching, research, and service have been a source of pride for all of us. Nothing is more important than that the University strive to meet the needs of its people and the challenges of their times. How that process has been carried out in the last biennium is the purpose of this report. If this report demonstrates that a great deal has been accomplished, it should also give the impression that the future is of primary concern. The University of Minnesota is an ongoing institution ever aware that the world for which it prepares its students is a world of increasing demands. The processes of education must keep abreast of the processes of the world. Further than that, the University and other institutions of higher education have been given the opportunity to lead. Service to mankind today and tomorrow characterizes our endeavor.

Like any endeavor, that of the University rests on a great deal of faith; and this faith comes from the trust the people of Minnesota have shown in the University's dedication to the future. It is this trust that we value most, so that in taking it from you we strive always to give it back to you.

*Meredith Wilson*

PRESIDENT

*“If there be a place in a democratic culture where the calm can be found in which reflection and meditation can take place, it is the university. If anywhere a haven shall exist where inquiring minds are encouraged to question every premise, where the mind is allowed to follow wherever the data lead, it will be the university.”*

FROM THE INAUGURAL ADDRESS OF THE UNIVERSITY'S  
NINTH PRESIDENT, O. MEREDITH WILSON, FEBRUARY 23, 1961.

## TEACHING

□ TEACHING IS THE PRIMARY RESPONSIBILITY of the University of Minnesota. The University taught more students in the 1964-1966 biennium than it ever had before. During 1964-1965, the University established a policy of controlled growth designed to maintain total enrollment within manageable limits dictated primarily by space considerations. The specific goal for fall quarter, 1965, was a student attendance of approximately 42,000. The regular student body at the beginning of the 1965-1966 year comprised 42,178 persons, compared with 38,403 persons at the beginning of the 1964-1965 year. In all, the University taught 122,405 students from July 1, 1964, through June 30, 1965, and 134,525 students from July 1, 1965, through June 30, 1966. These students were enrolled in the collegiate programs on the Twin Cities, Duluth, and Morris Campuses; in Schools of Agriculture and other subcollegiate schools; in the General Extension Division; in the Center for Continuing Education; and in the short courses conducted by the Office of Agricultural Short Courses and the Agricultural Extension Service. Freshmen who entered during the fall, winter, and spring quarters of the 1964-1965 and 1965-1966 academic years numbered 10,208 and 10,611, respectively, of whom 95 percent came from Minnesota high schools. During the same periods, foreign students, totaling 1,356 men and women in 1964-1965 and 1,463 in 1965-1966, comprised, as in recent years, about three percent of the student body. Nonresident collegiate enrollment—12 percent in 1964-1965 and 12.3 percent in 1965-1966—remained below the figure of 14 percent, which had prevailed during the 1950's. More complete data on enrollment, and on the degrees conferred and certificates awarded, can be found in the section of this report entitled "Facts and Figures."

□ THE 1964-1966 BIENNIUM saw a continuation of the reorganization of units carried on during the previous two biennia. The College of Biological Sciences, established by the Board of Regents during the last biennium, was formally inaugurated on September 1, 1965. The Botany and Zoology Departments from the College of Liberal Arts and the Biochemistry Department from the Institute of Agriculture were placed under the administration and budget of the newly formed College. In addition, a new Genetics Department was created by the voluntary transfer of certain professors from the Institute of Agriculture and from the Zoology Department. The Museum of Natural History, which previously occupied an independent status under the Academic Vice-President, has also been placed within the new College, as has the Dight Institute, which was formerly a part of the Graduate School. The chief purpose of these two transfers was to shift administrative responsibilities.

## University Reorganization

The space age is increasingly having its effect on the organization of the Institute of Technology. The Department of Mechanical Engineering and the Department of Aeronautics and Engineering Mechanics, with the approval of the Board of Regents and the concurrence of the faculties involved, were joined to create a new School of Mechanical and Aerospace Engineering. The Regents also established the Space Science Center, which will be multidisciplinary in nature, combining facilities of the Institute of Technology and other University units concerned with matters of space research and exploration.

In the College of Liberal Arts, the Departments of East and South Asian Languages, Middle Eastern Languages, and Slavic and East European Languages were created from the Department of Slavic and Oriental Languages. The Art Depart-

ment was divided into two departments: Art History and Studio Arts. A Linguistics Department was created, and the Public Administration Center was separated from the Political Science Department.

Two new divisions were established in the Institute of Agriculture. The Department of Food Science and Industries incorporated the former Department of Dairy Industries, and the Department of Animal Sciences combined work previously done in the Departments of Animal Husbandry, Dairy Husbandry, and Poultry Science. In addition, as a natural outgrowth of the University's increasing interest in international affairs, an Office of International Agricultural Programs came into existence in 1964. The Northwest School of Agriculture at Crookston was phased out during the biennium, and a new two-year Technical Institute emphasizing programs in agriculture and business was planned to utilize the existing facilities. The new unit began accepting students for the fall of 1966.

Other organizational changes included establishment of a Department of Secondary Education in the College of Education and creation of a Water Resources Center in the Graduate School. Two units were renamed: the Mayo Foundation for Medical Education and Research is now the Mayo Graduate School of Medicine, and the Department of Air Science is henceforth the Department of Aerospace Studies.

## Curricular Changes

□ INCREASINGLY, THE ACADEMIC UNITS of the University are revising and updating their curricular offerings. During the biennium, the need for revision has been felt by almost every department. In the College of Liberal Arts, several significant developments occurred. The foreign language requirement was increased to two college years, or twenty-five credits, in a single language, with allowance of five credits for each year of high school study in the language. For greater flexibility in program planning, changes were also introduced in upper division and major-minor requirements. Further, a new Bachelor of Fine Arts degree was created for students interested in the creative and performing arts. The Honors Program is now a fully realized addition to the College's activities, with advisers in all departments and a sophomore honors seminar similar to those for freshmen.

A major curricular change in the Institute of Technology was the replacement of the five-year degree programs in engineering with four-year degree programs. The reduction in graduation requirements brought about by this change has been mainly in technical subjects. Also during the biennium, an interdepartmental Ph.D. program in the control sciences was approved by the Graduate School, and a Center for Control Sciences was established for postdoctoral study and as a focus for research in this area.

A further significant reduction in curricular requirements occurred in the Law School when the summer session was discontinued. Influential in the decision to abandon the session was the fact that Minnesota was one of the few law schools with this extended requirement, which caused some of the potentially best students and lawyers to leave the State for their legal education. Within the continuing law curriculum, second- and third-year students were given a freer hand in choosing electives.

Among the numerous other changes in offerings were the reduction of the traditional Air Force ROTC program from four years to two years; new doctoral programs and changes in undergraduate admissions in the College of Education;

new requirements and additional curricula in the College of Agriculture, Forestry, and Home Economics; the institution of training of public health nutritionists and the substantial lengthening of degree programs in the School of Public Health; the approval and institution of a graduate curriculum in hospital pharmacy in the College of Pharmacy; the addition of undergraduate admission requirements and direct curricular changes in both undergraduate and master's programs in the School of Business Administration; multiple changes in both freshman and senior programs in the School of Dentistry toward an increased biologic orientation; and the full accreditation of the College of Veterinary Medicine by the Council on Education of the Veterinary Medical Association.

□ ENROLLMENT keeps bounding upward. The 3,725 undergraduates enrolled in the fall of 1964 represented a 17 percent increase over the number enrolled for the 1963 term. The following fall, in 1965, the figure reached 4,405, an increase of 18 percent. New highs were reached in both 1964 and 1965 with summer school enrollments of 2,343 and 2,453 students, respectively.

**University of  
Minnesota,  
Duluth**

Previous building projects were completed and new ones planned during the biennium. The formal opening of the new UMD Campus Club, a major addition to the Kirby Student Center, took place October 20, 1964, with former Regent Richard L. Griggs cutting the ribbon. In February, 1965, the new \$896,000 Home Economics Building was dedicated, and in August, Griggs Hall, a new 202-bed residence hall named in honor of the former Regent, was also dedicated. Among the planned projects are a \$1,280,000 Life Science Building, a \$910,000 addition to Griggs Hall, and the third phase of the UMD Library, financed by a \$466,000 federal grant from the Higher Education Facilities Fund. Ground breaking for the \$194,000 Marshall W. Alworth Planetarium took place on October 12, 1965.

Major curricular developments at Duluth involved bringing the general education requirements into line with all-University liberal education policies. The Master of Arts degree programs in chemistry, history, and English were strengthened, and graduate courses were added in several other fields as qualified staff became available.

A highlight of the biennium occurred near its end when Vice-President Humphrey addressed the Class of 1966 at its commencement on June 10.

□ DURING THE 1964-1966 BIENNIUM, classes and conferences sponsored by the General Extension Division had a combined total enrollment of 98,049 adults. This figure includes 54,716 persons attending classes or courses and 29,605 persons attending institutes, workshops, courses at the Nolte Center, and other legal, business, and civil defense courses. In each instance, the enrollments represented sizeable increases over the previous biennium.

**General  
Extension  
Division**

To serve these increased enrollments more effectively, the Extension Division initiated a series of major changes in its customary activities. Some of these changes have come about because of recent federal legislation, the Higher Education Act and the State Technical Services Act. New strength is now available for programs which previously have been self-supporting. Already, two projects are being fed-

erally funded: a program of Governmental Employee In-Service Training and a Certificate Course in Assessment and Appraisal.

With the adapting of the Center for Continuation Study into a fully realized Department of Conferences and Institutes, the sponsorship of continuing professional education by the Division has received considerable support. Within the past biennium, three additional positions were created, giving the Extension Division directors for continuing education in Engineering and Science, Legal Education, and Business Education. The increased activity in this area has had a fortuitous side effect. The Graduate School and Extension Division are now working together toward a joint registration procedure whereby a qualified student may complete as much of a master's degree through Extension courses as a given faculty is willing to arrange in an organized Extension program.

Further reorganization in the General Extension Division has resulted in the establishment of the position of Director of Continuing Education in Art, a new Department of Off-Campus Classes, a Program in Social Work offered through the Department of Evening Classes, the position of Director of Counseling, and a Department of Divisional Relations. The latter Department was created to inform Minnesotans that the Division is serving them in many ways and that the Division is a major point of contact between them and the University.

A constant challenge to the Division is the provision of programs and curricula which will satisfy the needs of its students. The Division continued to meet this challenge during the biennium in several ways. Two new certificate programs were added, one in Police Administration and the other in Assessment and Appraisal Administration. Evening students in the College of Liberal Arts may now pursue majors in art history, English, and humanities and may petition for completion through evening classes of a major in child psychology, French, psychology, and sociology.

The University Television College, begun in the fall of 1964, further extended the resources of the Division. The University's Bureau of Institutional Research aided the Division in describing the student body making use of this new College, and the results of this research are being used as a guide to future offerings. The use of closed-circuit television, begun during the last biennium, was increased by the addition of a graduate degree program in the Mechanical Engineering Department to the already existing Rochester arrangement. In the winter of 1966, two courses were transmitted via closed-circuit to the metropolitan area junior colleges as an experiment in the use of interinstitutional television.

A significant development was the Division's acquisition of a downtown Minneapolis location in 1966, when the MacPhail family gave the MacPhail College and School of Music to the University. The College has been incorporated into the Division and renamed the MacPhail Center for the Performing Arts. A balanced program of evening classes was scheduled to begin in the fall term of 1966.

The General Extension Division Center for Continuation Study was renamed the Nolte Center for Continuing Education as a memorial to the late Dean of the Division, Julius M. Nolte. A further change in the Center occurred with the unfortunate but necessary elimination of dormitory facilities because of the need for office space. The Division hopes that the Center may in the near future return to this unique and convenient residential type of operation.

□ THE OFFICE OF INTERNATIONAL PROGRAMS, instituted in the fall of 1963, has in the past biennium secured the funding necessary for the implementation of its initial programs. At present, primarily through grants from the Ford Foundation, the University's objective of encouraging and sustaining instruction, research, and service of an international nature is being fulfilled both on the Campus and abroad. The Office itself has the purpose of implementing and administering projects envisaged or developed by the various departments. To this end, the Office has expanded its staff. The addition of coordinators for International Programs in the College of Liberal Arts and the Institute of Agriculture brings to three the number of coordinators working directly under the Dean and Associate Dean. Further, the Office's service programs in Chile-Argentina and Brazil each have a manager. The staff is guided by the All-University Council on International Programs, and the Executive Committee of the Council consults frequently with the Dean in the intervals between general Council meetings. Contact with the faculty is maintained through eight committees with distinctive international concerns: Asia; Latin America; Western Europe; Russia and Eastern Europe; Economic and Social Development; Intercultural Communications; Science, Technology, and Development; and International Relations.

Funds have helped to insure the beginning of a seminar and workshop program and to permit faculty expansion and library support. A St. Paul Campus seminar focused on the world's food supply with regard to our growing population, and a Minneapolis Campus seminar discussed the components of the ecological system pertaining to human beings. Faculty expansion affected the Library and several departments of the College of Liberal Arts, particularly those dealing in Asian and South American studies. A Curator and an Assistant Curator were appointed to the East Asian Library, which is receiving the bulk of the library support in order to build to a minimum of 100,000 volumes.

For those programs not based on the University's campuses, the Office of International Programs received from the International Programs Division of the Ford Foundation two three-year grants to provide assistance in Chile and one two-year grant for a program in Argentina. One of the three-year grants (\$782,600) is for the development of higher education at the University of Concepción. The three-point program is designed to reorganize the overall academic program of the University, to establish a university-wide first-year program for students, and to institute a central library and library services. A principal feature of the program is the provision of funds for scholarship assistance to the faculty of the University of Concepción for advanced study abroad.

The second three-year grant (\$518,100) provides for assistance in agricultural production education and for University staff to assist the government of Chile and Chilean universities in the development of agricultural extension activities, particularly a technical service for other public bodies working with rural people. The two-year grant in Argentina calls for a staff member from the Institute of Agriculture Department of Agricultural Economics to serve as Program Specialist in Agricultural Economics with the Ford Foundation in Buenos Aires.

The latest overseas program, also financed by the Ford Foundation, is centered on educational assistance at the University of Paraná in Brazil. Here the objective is to enable the University of Paraná to prepare agricultural education leaders and teachers to help meet the need for vocational agricultural training in rural junior high schools and to promote development of vocational agricultural education throughout the State of Paraná. The program has three goals: (1) a two-year teacher-training school for graduates of agricultural high schools; (2)

a four-year University degree program for qualified graduates of any senior high school; and (3) an Agricultural Teacher Training Center which will serve as the directorate for all aspects of the program.

During the biennium, the deanship of the Office of International programs was passed from Dr. Will M. Meyers to Dr. Willard W. Cochrane.

## University Libraries

□ FEDERAL AND STATE MONEY enabled the University Libraries to close out the biennium with the achievement of two long-sought-for goals. Favorable action by the Legislature permitted an increase of more than \$200,000 in the budgets of the Minneapolis and St. Paul Campus libraries. The increase made possible, by the end of the biennium, the purchase of retrospective desiderata previously not obtained for lack of funds. The University of Minnesota, Morris, with its emerging four-year curriculum, also received a substantial increase in library funds.

Federal help, consisting of matching funds available under the Higher Education Facilities Act, made possible the planning and funding of the complete West Bank Library as originally planned. A generous grant from the Legislature further contributed toward making the new building a reality. Barring unforeseen delays, the West Bank Library, planned to house and service the major holdings in the Social Sciences and the Humanities, should be ready for use by late 1968. With a working capacity of 1,500,000 volumes and seats for approximately 2,500 readers, the Library will be fully air-conditioned to assure proper temperature and humidity controls for the collections and to permit most efficient use for study and research during the winter and summer months.

Additional library expansion has included the completion of two more floors for the Bio-Medical Library, the shifting of the Public Administration Library to a new facility in the West Bank Classroom Building, and the beginning of construction on a second-phase addition to the Library at the University of Minnesota, Duluth.

The expansion of the Library's Archives, begun during the last biennium, has been carried forward during this biennium. In 1966, Professor William Wright of the History Department was appointed Director of the newly established Center for Immigration Studies. A gift of the office archives of the magazines *Survey* and *Survey Graphic* prompted the establishment of the Social Welfare History Archives. Through the efforts of Professor Clarke Chambers of the History Department, this archive has received deposits from many of the principal social welfare associations in the United States.

To assist the administration in determining the feasibility of automating procedures and services of the Library, an Automation Coordinator has been making systems analyses of selected library operations.

The Library has continued to acquire rare and valuable editions and collections. The acquisitions include the balance (a 10,000-pound shipment) of an extensive collection of children's illustrated books and original art work bequeathed to the Library by the late Dr. Irvin Kerlan; several items of unusual significance on the history of exploration and commerce, acquired for the James Ford Bell Collection; and considerable material relating to Nazi Germany—microfilms of the *NSDAP Hauptarchiv* and a phono-tape collection of over 300 speeches and excerpts from Hitler, Goebbels, Goering, and others.

□ **BEGUN IN 1960**, the Morris Campus of the University reached the level of a four-year liberal arts college in 1964. At that time enrollment was 690. By 1965, this figure had reached 984; and as the number of students increased, the test scores and high school rankings of incoming freshmen rose. Also, by 1965, the number of students commuting had decreased to the extent that 82 percent of the student body lived on campus or in housing in the community of Morris. Sixty-nine counties and two hundred and seven high schools from Minnesota are now represented on the Campus.

The original building program for the college was accelerated during the biennium. The Morris Campus Planning Committee, after five years of deliberation, completed a proposed ten-year master plan for the entire Campus, to accommodate a student enrollment of 2,000. The first unit of the natural science complex was scheduled for completion in the fall of 1966 at about the same time construction on the first unit of the new library was to begin.

A major step has been taken toward the establishment of a solid curriculum with the addition of four liberal arts majors in philosophy, speech and theatre arts, chemistry, and physics. Further, a new set of requirements, to begin fall, 1966, was introduced for the Bachelor of Arts degree. General education requirements were raised from 90 to 120 credits, to be distributed over the five general areas of English, foreign language, social sciences, humanities, and natural sciences. Other significant developments relating to the curriculum were the addition of a freshman honors program and the introduction, on an experimental basis, of television replay units on the Campus.

Beginning in the fall of 1965, the Danforth Foundation designated a faculty member as a Danforth Associate for the Campus and provided the challenge to further the development of educational experiences through informal group discussion and activities.

During the biennium, the Financial Aids Office kept abreast of developments in resources available from the federal government to assist students with the financial burden of their education. Scholarship funds from individual contributors and from the "Dollars for Scholars" drive benefited approximately ten percent of the student body with a total of \$227,250 awarded during the biennium.

Those interested in maintaining a high level of educational opportunity at Morris and in the region have been aided by the Southwest and West Central Minnesota Educational Research and Development Council, a nonprofit corporation which obtains and disseminates information about resources available to improve education in the region and which coordinates the efforts of all educational agencies with such a goal.

□ **TOTAL ENROLLMENTS** in the two five-week summer terms of 1964 were 22,438, an increase of 9.59 percent above those of 1963. Included in this total are some students who were counted twice because they attended both of the terms. The number of unduplicated enrollments was 15,507. In 1965, total enrollments were 23,641, or 5.3 percent above those of 1964. The unduplicated enrollments for 1965 numbered 17,179, the highest such figure in the history of the University. More than 50 percent of those enrolled in a summer session are enrolled in regular academic programs the following fall; however, the number of summer students

seeking degrees, and therefore considered to be regularly enrolled, is approximately 75 percent.

An effort was made in the summer of 1964 to persuade students who had graduated from high school in June to begin their University careers in the summer session. This was not overly successful for only 363 registered. In 1965, the number of entering freshmen rose to 539, an increase of 48.5 percent. In part, this increase was attributed to the fact that students enrolling in the summer session could avoid the higher admission requirements being applied the following term.

In the sessions during both 1964 and 1965, several training institutes and special programs were offered. The institutes held were for teachers of German, Spanish, chemistry and physics, radiation biology, biology, English, and geography, and for college guidance workers, education media specialists, and school librarians. Institutes sponsored by the National Science Foundation were held for teachers of agricultural sciences, high school teachers of physics and chemistry, and college teachers of inorganic chemistry. Among the special programs were an institute on Minnesota government and politics; workshops for college faculty and administrators; and workshops in home economics, industrial education, social studies education, and school administration.

The Biology Session at the University's station in Itasca State Park continued to grow. In 1965, two six-week terms were offered. In late summer and fall, 1965, plans were worked out for three summer terms at the Lake Itasca Forestry and Biological Station.

During the biennium, the groundwork was laid for a new emphasis on the arts in the summer (beginning with "Summer Music at Minnesota," June 12 to July 11, 1966), with the Minneapolis Symphony Orchestra as the teaching unit for special programs in music and music education. The Orchestra also serves the summer program of cultural events.

## RESEARCH

□ THE RESEARCH CONDUCTED by the various units of the University is an indirect link connecting teachers, students, and the public. Often the theories tried out in the classroom become the practicalities which influence all of our lives. This research is constantly interpreting and reinterpreting the facts of the world that surrounds us, and coming up with new facts in the process. Research is more and more shaping man's vision of himself, and the multitude of projects carried out at the University of Minnesota provides solid contributions to this shaping. The following paragraphs are an attempt to indicate the nature of the research activities of some University departments. The summary must of necessity be brief, but it strives for an overall look at the University inquiry during the biennium.

### Agricultural Experiment Station

□ INVESTIGATIONS of field crop and horticultural plants have produced a new hard red spring wheat variety, *Chris*. This variety combines good yield, test weight, and quality with resistance to the prevalent races of stem and leaf rust. In addition, it has averaged two-to-three bushels more per acre than other recommended varieties. It is adaptable not only to Minnesota but also to North and South Dakota and other hard red spring wheat growing areas.

The biochemistry of cereal grain germination is receiving considerable attention in relation to the consumption of materials such as malted barley and wheat by human beings and animals. The nature of wheat constituents, as well as those of other cereals, and the changes they undergo during storage and processing are being investigated. An improved method for lipid analysis has been developed and has promise of importance in studying development of rancidity in foodstuffs. Rancidity in cereal products has always been of concern, and to date three enzymes have been identified and isolated for further study. This could well result in improved means of food stabilization.

Studies are being conducted at the School of Forestry on how readily water drains from wood pulp mats or pads and how the inner content of water affects the drainage rate permeability. This research has practical application for certain water permeability tests used in the paper industry to predict the paper-making quality of wood fibers. The results of the tests are dependent upon an accurate measurement of the true drainage rate. The usefulness of the results is questionable if the drainage rate is affected by the presence of minute air bubbles.

Research dealing with our environment is becoming increasingly important. The studies on physiologic processes using strontium accumulation as one of the indicators are very important in the determination of element accumulation by plants. Lead accumulation on forages consumed by animals has resulted in death. Foliage contamination with lead near a battery smelter south of the Twin Cities had been held responsible for a number of animal deaths. Lead-containing automobile exhaust from major highways has also been suspect. Soils near both of these sources show contamination with lead and the possibility of absorption of toxic levels of lead by forage plants from such contamination. Minnesota research finds that bromegrass absorbs significant quantities of lead from highly contaminated soils, but the degree of the absorption is not sufficient to cause a concentration toxic to animals consuming the forage. Bromegrass is one of the important forage species in Minnesota.

□ THE INVOLVEMENT of the School of Business Administration in research ranges from theory development to the analysis of conditions and procedures directly related to the Minnesota economy. Among the projects being supported by the School are investigations of potential manufacturing opportunities in Minnesota, retail/wholesale trade and service trends and patterns in Minnesota, the processing of employee grievances in Minnesota, labor organization and U.S. wage inflation, top-level organizational structures and managerial control systems in transnational business corporations, and the meaning of "psychological pricing" and the "learning" value of consumer projects.

To help disseminate the findings of such research projects, the School inaugurated two series of publications during the biennium. *Minnesota Business Profiles* is designed to report trends and prospects of the State's business climate and development, and *Sources on Business Topics* makes available to the business community annotated bibliographies on key subjects.

The Industrial Relations Center, a division of the School of Business Administration, has been carrying on research since its founding in 1945. Recent activities have included studies of worker motivation, management organization, collective bargaining, labor mobility, personal values and behavior in employment, manpower

## School of Business Administration

forecasting, wage and price relationships, and the labor market of youth. These projects have provided valuable education and training for about fifty graduate student research assistants during the biennium.

### **School of Dentistry**

□ THROUGH RECRUITMENT of competent investigators and benefits derived from remodeled research laboratories, the School of Dentistry has enjoyed a surge of research activity by its faculty, graduate students, and undergraduate students during the biennium. Two major projects begun in the last biennium are still in progress.

The first project concerns the etiology and treatment of periodontal disease, one of the most common diseases of man. One phase of the project is a study of the role of diabetes in this disease, since it has been observed clinically that there appears to be a higher prevalence of advanced periodontal disease in diabetics. A histologic investigation of the periodontium and contiguous tissues of diabetic animals is being conducted to determine a possible deleterious effect of diabetes on collagen, one of the principal basic tissues in the supporting structures of the teeth.

Through studies of circulation in teeth and supporting structures, the second project, it is hoped that needed information can be found on the normal blood flow in these structures and on flow conditions during inflammatory processes involving bone and pulpal tissues, bone healing, and decalcification. Circulation in teeth and supporting structures is being examined by tracer techniques employing radioactive elements.

The University of Minnesota School of Dentistry is one of the leading schools in the country in terms of research and research training grants received from various agencies. Only one other school, for example, has National Institutes of Health support for the combined D.D.S.-Ph.D. program.

### **University of Minnesota, Duluth**

□ FACULTY RESEARCH ACTIVITIES financed by outside funds increased substantially during the biennium with grants in support of investigations such as a Study of the Electrophoresis of Compounds, Limnological Studies of Lake Superior, Electronic Energy Calculations, Infrared Radiation Studies, Atmospheric Electricity Studies, and an Economic Study of the Proposed Voyageurs National Park. Major grants were made by the National Science Foundation for scientific equipment and support for the computer center. Further, the U.S. Office of Education allocated \$130,000 for an Experienced Teacher Fellowship Program in Science and Mathematics.

### **College of Education**

□ IN A NEWLY ESTABLISHED RESEARCH LABORATORY in the School of Physical Education, studies have involved tests of strength, psychomotor response, anthropometric measurements, respiratory functions, and cardiovascular changes during and following prescribed exercises.

Another new agency, the Coordination Unit for Research in Occupational Education, was established to stimulate research activity in Minnesota in this particular branch of education.

The Institute of Child Development has continued to gain recognition as a major center for research and graduate training in child psychology. A major training grant of \$470,157 was awarded to the Institute by the National Institute of Child Health and Human Development to train graduate students in the study of the behavior and development of preschool children.

The Educational Research and Development Council and the Bureau of Field Studies and Surveys have continued to make studies which contribute directly to the needs of public schools. During the biennium, the Bureau conducted thirty-three separate projects in thirty-one different school systems, twenty-eight of the projects in Minnesota, two in North Dakota, and one each in Missouri, South Dakota, and Wisconsin. The Bureau signed a \$114,000 contract with the State Department of Education to conduct a comprehensive survey of public elementary and secondary education.

Significant to the research activities of the College of Education and to the University as a whole was the establishment by the Regents in July, 1965, of the Minnesota Center for Curriculum Studies, an all-University unit responsible to the Dean of the College of Education. The major function of the Center is to coordinate existing curriculum development projects such as Project English, Project Social Studies, and those being developed through the Minnesota School Mathematics Center. In its first year of operation, 1965-1966, the Center established the Upper Midwest Regional Educational Laboratory. The emphasis here is on curriculum development, research dissemination, and teacher education for elementary and secondary schools in the five-state region.

□ DURING EACH YEAR OF THE BIENNIUM, the amount of money disbursed by the Graduate School from its own research funds increased over the previous year. For the year 1965-1966, the figure was \$423,000, distributed through 231 grants.

## Graduate School

Most of the grants were relatively small, averaging less than \$2,000, and could generally be characterized as "seed-money" grants to explore new research areas or to run pilot studies of research problems. Many of these projects develop into larger or continuing projects which can turn, at that point, to external financial support. The valuable programs supported by these funds also include the Faculty Summer Research appointments. Nineteen such appointments were made in 1965, and the number was increased to thirty-five for the summer of 1966.

The Graduate School Research Center continues to provide faculty members with services which will facilitate their teaching and research and to publish each year an *Inventory of Faculty Research*. The Arts and Letters Advisory Council has begun a new monograph series. The first two publications in the series are a study of prose styles and a commentary on Jane Austen's *Mansfield Park*. The Social Sciences Advisory Council produced two successful television series during the biennium. "Man vs. Time," which appeared in the spring of 1965, was published in 1966 as a paperback. The second program, "In the Shadows of Affluence," was televised in the spring of 1966.

Further assistance to research at the University is provided by the fellowship program administered by the Graduate School. During the biennium, a notable increase in fellowships came about through the NDEA Title IV program. Most of the increase was registered in fellowships to students in education, social sciences,

and humanities. Approximately one third of the fellowships went to students in the sciences and in engineering. The Cooperative Fellowship program, administered jointly by the University and the National Science Foundation, has been discontinued and has been replaced by a traineeship program. The traineeship program is expanding Foundation support from the engineering fields into the natural, physical, and social sciences.

As for fellowships offered through University-controlled funds, a great need still exists for grants which are unrestricted as to field and which carry with them stipends matching those of external fellowships.

### **Cedar Creek Natural History Area**

THIS UNIQUE 4,700-ACRE TRACT preserves outstanding plant and animal associations, provides a base for research by ecologists of the Minnesota Academy of Science as well as the University of Minnesota, and serves as a site for field studies by classes of many colleges. Major research projects involving studies of animal movements by radio-telemetry techniques and studies of behavior of waterfowl, energy pathways in forest detritus, and properties of the ionosphere were carried out during the biennium.

### **Dight Institute**

ONE OF THE MAJOR ACHIEVEMENTS of the Dight Institute to date is the work on the genetics of mental retardation. The results of sixteen years of research were summarized by Drs. Elizabeth W. Reed and S. C. Reed in a 719-page book entitled *Mental Retardation: A Family Study*, published in 1965. This book appeared at a propitious time and introduced a new dimension into the thinking of the state planning councils on mental retardation.

A generous grant from the National Institute of Mental Health has initiated a training program in human behavior genetics which is being carried out with the cooperation of members of the Departments of Psychology and Psychiatry.

### **Hormel Institute**

HAVING PREVIOUSLY ATTAINED RECOGNITION throughout the world for contributions in the study of the chemistry and biochemistry of fatty acids and other lipids, the Hormel Institute has recently gained further recognition for its contributions to analytical and preparative methodology for use in studying the role of various lipids in cardiovascular disease.

### **Mayo Graduate School of Medicine**

THE MAYO GRADUATE SCHOOL OF MEDICINE, known as the Mayo Foundation for Medical Education and Research until 1964, is continuing its role in graduate medical education as part of the University Graduate School. The total number of graduate students in 1966 exceeded 700, most of them being trained in clinical specialties. A recent medical-manpower survey showed that 682 physicians who had training at the Mayo Graduate School of Medicine now reside in Minnesota, and that 566 of these had attended medical schools outside of Minnesota.

# **FACTS AND FIGURES**

**1965-1966**

## Enrollment in Colleges

|   |        |
|---|--------|
| General College   | 4,626  |
| College of Liberal Arts                                 | 15,562 |
| University College                                      | 67     |
| Institute of Technology                                 | 3,519  |
| College of Agriculture,<br>Forestry, and Home Economics | 2,598  |
| College of Education                                    | 3,468  |
| School of Business Administration                       | 1,027  |
| College of Pharmacy                                     | 249    |
| Law School  | 580    |
| College of Veterinary Medicine                          | 206    |
| School of Dentistry                                     | 479    |
| College of Medical Sciences                             | 1,347  |
| Graduate School   | 8,561  |
| Duluth Campus   | 4,850  |
| Morris Campus   | 1,060  |
| Summer Session  | 17,178 |
|   | <hr/>  |
|   | 65,377 |
| Less duplicates*  | 9,620  |
| TOTAL   | <hr/>  |
|   | 55,757 |

\* Individuals who have enrolled in more than one school or division during the year have been counted only once.

## Enrollment in Extension Division

|                               |        |
|-------------------------------|--------|
| Evening and Special Classes   | 24,603 |
| Short Courses                 | 6,468  |
| Correspondence Study          | 11,325 |
| Center for Continuation Study | 11,167 |
|                               | <hr/>  |
| TOTAL                         | 53,563 |

## Enrollment in Agricultural Short Courses

|   |        |
|---|--------|
| Institute of Agriculture, St. Paul                        | 15,099 |
| Northwest School of Agriculture and<br>Station, Crookston | 2,500  |
| West Central School and Station,<br>Morris                | 2,642  |
| North Central School and Station,<br>Grand Rapids         | 105    |
| Southern School and Station, Waseca                       | 3,192  |
| Southwest Station, Lamberton                              | 415    |
|   | <hr/>  |
| TOTAL   | 23,953 |

## ROTC Commissions Conferred

|                        |       |
|------------------------|-------|
| For the U.S. Army      | 32    |
| For the U.S. Navy      | 28    |
| For the U.S. Air Force | 21    |
|                        | <hr/> |
| TOTAL                  | 81    |

## Enrollment in Subcollegiate Division

|   |         |
|---|---------|
| Northwest School of Agriculture,<br>Crookston   | 221     |
| Southern School of Agriculture,<br>Waseca   | 270     |
| University Schools, Minneapolis<br>(High School; Elementary School,<br>Grades 5 and 6; and Nursery) | 587     |
| Laboratory School, Duluth   | 174     |
|   | <hr/>   |
| TOTAL   | 1,252   |
| TOTAL ENROLLMENT  | 134,525 |

## Degrees and Certificates Granted in 1965-1966

|  |       |
|--|-------|
| General Extension Division                               | 39    |
| General College  | 620   |
| College of Liberal Arts                                  | 1,527 |
| University College                                       | 24    |
| Institute of Technology                                  | 563   |
| College of Agriculture, Forestry,<br>and Home Economics  | 289   |
| College of Education                                     | 925   |
| School of Business Administration                        | 355   |
| College of Pharmacy                                      | 64    |
| Law School   | 166   |
| College of Veterinary Medicine                           | 93    |
| School of Dentistry                                      | 207   |
| College of Medical Sciences                              | 445   |
| Graduate School  | 1,523 |
| Duluth Campus  | 566   |
| Morris Campus  | 87    |
|  | <hr/> |
| TOTAL  | 7,493 |
| Nondegree Certificates<br>Issued by Schools and Colleges | 425   |

# Sources of Funds

General  
Operations and  
Maintenance Fund

Restricted  
Funds

Auxiliary  
Enterprise  
Fund

## FROM THE STATE

### State Appropriation

\$38,770,027.00

For the general support of instructional, research, and administrative departments, and maintenance of instructional buildings and grounds.

### Indigent Patients

\$ 4,392,302.70

Cost of the indigent patients at the University of Minnesota Hospitals—cost shared by counties.

### Special Projects and Research

6,173,551.00

Includes appropriations that enable the University to perform special projects requested by various interested groups of citizens of the State such as Agricultural Extension, Beneficiation of Manganiferous Ores, General Agricultural Research, Medical Research, Psychopathic and Child Psychiatric Hospitals, Hospital Rehabilitation Center, Livestock Sanitary Board, and many other programs.

## STUDENT TUITION AND FEES

15,365,892.04

281,399.23

Includes collegiate, Extension Division, and Summer Session tuition and fees for all campuses.

## SALES AND SERVICES

8,584,601.26

11,438,699.37

Includes hospital receipts, dental infirmary, sale of bulletins, agricultural products, receipts from the operation of University Theatre, the Cancer Detection Center, and other receipts.

## AUXILIARY ENTERPRISES

\$21,659,432.05

Includes income from such activities as Dormitories, Dining Halls, Married Student Housing, Printing, Laundry, University Press, Concerts and Lectures, and Health Service.

## FEDERAL GOVERNMENT

Instruction, Agricultural Research, and Extension.

3,684,638.62

Sponsored Research, Training Programs and Institutes, and other projects.

30,777,551.80

## CORPORATIONS, FOUNDATIONS, INDIVIDUALS, AND OTHER

7,937,650.10

Gifts, Grants, Research Contracts, and income from Endowment.

## INTERCOLLEGIATE ATHLETICS

1,673,200.41

Includes Duluth and Morris.

## TOTALS

\$62,720,520.30 \$64,685,792.82 \$23,332,632.46

# Uses of Funds

|   | General<br>Operations and<br>Maintenance Fund | Restricted<br>Funds    | Auxiliary<br>Enterprise<br>Fund |
|---|---|------------------------|---------------------------------|
| <b>ADMINISTRATION</b>   | \$ 1,948,573.93                               | \$ 228,436.37          |                                 |
| The expenses of the offices of the President, the Vice-Presidents, the Business Office, the Office of Civil Service Personnel, the Storehouses, and other general administrative offices.   |   |                        |                                 |
| <b>GENERAL EXPENSE</b>  | 7,218,572.15                                  | 164,685.70             |                                 |
| The expenses of the offices of the Dean of Students and Admissions and Records, the cost of staff insurance and retirement, inter-campus bus, truck service, general bulletins and publications, convocations, and other services of a general expense character. |   |                        |                                 |
| <b>INSTRUCTION AND DEPARTMENT RESEARCH</b>  | 30,225,003.58                                 | 8,797,142.05           | \$ 116,554.35                   |
| The expense of college instruction and departmental research, including instructional trust funds.  |   |                        |                                 |
| <b>LIBRARIES</b>  | 2,189,869.38                                  | 88,476.59              |                                 |
| <b>ORGANIZED ACTIVITIES RELATING TO INSTRUCTIONAL DEPARTMENTS</b>   | 1,155,354.17                                  | 15,194,376.28          |                                 |
| Includes the cost of operating University Hospitals, University High School, University Elementary School, the University Theatre, and other related activities.  |   |                        |                                 |
| <b>EXTENSION AND PUBLIC SERVICES</b>  | 4,360,860.56                                  | 7,872,011.50           | 3,454.39                        |
| Includes activities such as the General Extension Division, Agricultural Extension, and Museum of Natural History.  |   |                        |                                 |
| <b>BUDGETED AND SPONSORED RESEARCH</b>  | 2,546,458.32                                  | 29,175,919.48          |                                 |
| Includes the Agricultural Experiment Stations, the Mines Experiment Station, and all sponsored research.  |   |                        |                                 |
| <b>PHYSICAL PLANT OPERATIONS</b>  | 8,226,147.54                                  | 6,207.35               | 201,442.34                      |
| The expenses of maintaining and operating the buildings and of other improvements on all campuses.  |   |                        |                                 |
| <b>AUXILIARY ENTERPRISES</b>  | 1,473.79                                      |                        | 20,586,547.24                   |
| Includes expenditures for such activities as Dormitories, Dining Halls, Married Student Housing, Printing, Laundry, University Press, and Health Service.   |   |                        |                                 |
| <b>STUDENT AID</b>  |   | 2,250,340.56           |                                 |
| Includes Fellowships, Scholarships, and Prizes.   |   |                        |                                 |
| <b>TRANSFERS, INCREASE IN OBLIGATIONS, AND OTHER ADJUSTMENTS</b>  | 4,848,206.88                                  | 908,196.94             | 2,424,634.14                    |
| <b>TOTALS</b>   | <u>\$62,720,520.30</u>                        | <u>\$64,685,792.82</u> | <u>\$23,332,632.46</u>          |

□ THE WATER RESOURCES RESEARCH CENTER was established in the Graduate School on September 1, 1964, as an interdisciplinary component of the University. The Center has the responsibility of unifying and stimulating University water resources research through the administration of funds covered in the Federal Water Resources Research Act of 1964 and of those made available by other sources. At the close of the biennium, the Center was sponsoring fourteen research projects involving the physical and biological sciences. Principal investigators are faculty members in nine departments of the University.

## **Water Resources Research Center**

□ A COMPREHENSIVE STUDY of long duration came to an end during the biennium. It culminated in the statistical analysis and publication of data obtained from University women over a 30-year period in which variations of the human menstrual cycle were observed. A new project, Developing System for Care of Low Resistance Patients, was begun during the biennium and is being supported by the National Cancer Institute.

## **University Health Service**

□ THE BUREAU OF INSTITUTIONAL RESEARCH carried on research in several areas throughout the biennium. Most ambitious was the study of examination practices on the undergraduate level at the University. All faculty members who taught undergraduate courses were sent questionnaires in which they were asked to describe the kind of tests they gave and any other means they used to evaluate the students' work. Other studies begun during the biennium included a study on student financial needs, prompted by the students themselves after a recent tuition increase; a pilot study to assess quality characteristics of the faculty; research on the characteristics of those either interested in, or enrolled in, the TV College; and evaluative studies for various departments, Biology and German in particular. Also, the second phase of the Bureau's study of the academic progress of student athletes was begun during the 1965-1966 academic year.

## **Bureau of Institutional Research**

The Administrative Research Unit completed the adaptation for computer analysis of the course inventory summary. Previously this data had been summarized by hand computation, involving many hours of clerical work. Among studies undertaken by the administrative unit at the request of the central administration was a comparison of University salaries with those of other Big Ten institutions and the University of California.

Much of the work of the Bureau is involved with state-wide and regional studies. Early in 1965, the Bureau completed a study of midwestern enrollments in five fields of professional study: medicine, dentistry, veterinary medicine, pharmacy, and forestry. Interstate agreements in professional programs may be a result of this research. At the same time, the Bureau received a budget of \$150,000 to conduct a state-wide study on the feasibility of the interinstitutional use of television in instruction.

## **International Programs**

□ **CAMPUS-BASED INTERNATIONAL PROGRAMS** were stimulated by a \$1,250,000 grant from the International Training and Research Division of the Ford Foundation. Part of the money has gone toward establishing a small-grant program to assist faculty with research and teaching. As of April, 1966, fifty-nine faculty proposals had been funded. Several larger team research projects are also benefiting from the Ford Foundation grant. These include an interdisciplinary project on Western Europe and Atlantic relationships, team research on communication through mass media, and a comparative analysis of political modernization and democratization.

A unique feature of the Ford Foundation-University of Minnesota participation in the Paraná Project (discussed above under "Teaching") is the proposed research component. Researchers from the University of Minnesota will work jointly with researchers from the University of Paraná. Hopefully, this will help establish research as a continuing element in the development of agricultural education in Paraná.

## **College of Liberal Arts**

□ **RESEARCH CONTINUES** to be an integral and important part of the College's activity. In the biennium, grants from outside sources for research by departments in the College totaled \$1,600,000, in contrast to \$1,900,000 in the previous two-year period. The number of grants received during the biennium was approximately 190. These figures tell only part of the story, however, for there is an impressive amount of research undertaken by the faculty which is not supported by outside funding.

Many activities, designed to enhance or facilitate research, were begun during the biennium. The Statistical Center, whose purpose it is to provide statistical assistance to the researcher, was transferred from the Graduate School to the College. The Social Science Research Facilities Center was created to provide computer programming and assistance. Also created were the Center for Immigration Studies, the Social Welfare History Archives, and the Center for Northwest European Language and Area Studies, all of which have important research implications. It is anticipated that the College will become importantly involved in whatever develops in the "community-planning" activities of the University.

## **College of Medical Sciences**

□ **RESEARCH IN THE COLLEGE** of Medical Sciences continues to be broad and varied, and the University is fortunate in the outside support the College receives for its medical investigations. Listed below is a sampling of research being conducted by the numerous departments.

The Department of Internal Medicine, through grants from the United States Public Health Service, is carrying on studies in allergy and immunology training, a group diabetes program to study the effect of treatment on the complications of diabetes, and a study entitled the Minnesota Coronary Survey Research Project on the Effect of Dietary Change on Human Atherosclerosis.

In Neurosurgery, research projects have been directed toward the study of relationships between thyroid function and the central nervous system, the study of techniques valuable in assessing personality variants in patients with specific neuro-

logical lesions, and the development of a stimulator to control urination in paraplegic patients.

In collaboration with the Kenny Rehabilitation Institute, the Department of Physical Medicine and Rehabilitation has been designated Regional Rehabilitation Research and Training Center No. 2 of the Vocational Rehabilitation Administration. Among the studies being conducted are an evaluation of the work of the heart during hospital and daily activities and research on kidney function after spinal cord injury, methods of rehabilitation of children with cerebral palsy, speech evaluation and therapy for children and adults, and vocational rehabilitation of handicapped patients.

Members of the Division of Radiation Therapy have reported new observations and techniques in the clinical applications of nuclear medicine and radiotherapy. In this regard, the role of preoperative radiotherapy in the management of lung cancer is being explored. Another study concerns the use of intra-arterial oxygen as a factor enhancing radiation efficiency. Further, a \$22,000 United States Public Health Service grant was made to the Division for the study of the biology of murine lymphomatous tumor cells.

A research grant has been approved by the National Institute of Mental Health for a follow-up study into adulthood of 1,000 adolescents seen by the Department of Psychiatry and by the Division of Child Psychiatry between 1938 and 1950. Data gathered on this group should provide significant material for many pertinent studies.

The Department of Physiology has received major grants from the United States Public Health Service for cardiovascular studies and for training and recruitment. Research has revealed that bretylium tosylate is an antifibrillatory drug that may be of value in the prevention of fatal heart arrhythmias in human beings. The University is patenting the use of the drug, and, if clinical trials are successful, it should return money to the University.

The Department of Pharmacology has initiated two studies on the mechanism and drug modification of memory and learning, and the pharmacological comparison of brain stem and other cerebral synapses.

The Department of Laboratory Medicine has received grants for research on oxygen exchange reaction on heart and skeletal muscle proteins, the relationship between the subunit structures of enzymes, the inhibition of glycolysis in cancer cells and normal cells, and the nucleic acid replication patterns in developing cells as related to congenital defects in man.

During the biennium, the School of Public Health has seen a rapid expansion of its research programs, particularly in the fields of physiological hygiene, environmental health, and epidemiology. For many years the Laboratory of Physiological Hygiene has been conducting an active investigatory program on the relationship between nutrition and cardiovascular disease. With the development of expanded research laboratories in the basement of the west wing of the Health Service, financed by a research construction grant from the Public Health Service, the School has been able to expand materially its growing program of research in environmental health. Most notable in this regard are research on the control of the spread of infections within hospitals and studies on various aspects of space biology and air pollution.

**University of  
Minnesota,  
Morris**

□ GRANTS totaling \$16,600 were received to equip psychology laboratories that will familiarize students with current research tools and strategies in areas of perception and sensation. Further, matching funds with a federal grant under Title VI of the Higher Education Act provided a total of over \$36,000 to equip a new foreign language laboratory and a new statistics laboratory.

**Museum of  
Natural History**

□ THE CONTINUING RESEARCH of the Museum of Natural History was supported during the biennium by grants totaling approximately \$370,000. Groups such as the Maud and Louis Hill Family Foundation, the U.S. Atomic Energy Commission, the National Institutes of Health, and the Office of Naval Research are sponsoring major investigations of animal wildlife. Among these are a study of radiation and other factors influencing the distribution of animals and a survey of ornithology, mammalogy, ecology, microbiology, and tropical medicine.

With the assembling of various collections of birds, mammals, fishes, Pleistocene vertebrates, and molluscs in the new wing of the Museum, the total number of specimens was increased by over 27,000.

The Museum is playing a significant role in a World Wildlife Fund project regarding the preservation of the disappearing spectacled bear. A gift of \$4,000 was offered to the Museum's Curator of Mammals to make preliminary investigations in Brazil, Peru, and other South American countries.

**Institute of  
Technology**

□ RESEARCH IN THE INSTITUTE OF TECHNOLOGY reached a level of support in excess of ten million dollars annually during the biennium. The range and depth of this research is suggested by the survey that follows.

Significant additions to the Physics Building provided a home for the new Tandem Van de Graaff accelerator and space for office and laboratory work on several cosmic ray, atmosphere, and space research projects. The accelerator and the funds for its installation and operation were provided by the Atomic Energy Commission. The addition in which it is located was financed by a legislative appropriation, a grant from the National Science Foundation, and funds provided by the University.

To be associated with the new Space Science Center, which is interdisciplinary in nature, is a hybrid computation facility. This facility, when combined with the new digital computer to be acquired for the Numerical Analysis Center, will provide the University with one of the most extensive and modern university computing facilities in the United States. The new Control Data 6600 computer for the Numerical Analysis Center will have a capacity approximately twenty times that of its predecessor.

An objective study of the need for geologic research in the State, begun four years ago by the Minnesota Geological Survey, was completed during the biennium and published in a report entitled *Our Land and Mineral Resources—A Long-Range Plan for Geologic Research in Minnesota*. During the last year of the biennium, systematic State-wide geologic mapping was begun, the objective of the ten-year project being a geologic map atlas of the State. Data obtained during the program

will aid in developing new mineral resources and in locating and evaluating ground water supplies.

Minnesota has an unusually large spectrum of lake types, ranging from the "unproductive" lakes of the northeast corner to the "rich" lakes of the southwest. A program involving broad sampling of these lakes is well under way by the Limnological Research Center. The intent is to study the variations in organic productivity, algae content, and water chemistry with respect to climate, regional vegetation, general hydrology, and geology.

Another major activity of the Limnological Research Center is the study of lake sediments to determine the long-range history of lakes and their environment. This involves analyses of pollen, larger plant fragments, and microinvertebrates of the sediments, as well as chemical analyses.

The research activities of the Mines Experiment Station can be divided into three broad categories: (1) efforts directed toward improving existing technology on the Mesabi Range and developing new processes for concentrating Mesabi Range ores; (2) research efforts directed toward developing an economic process for making beneficial Cuyana Range ores; and (3) general research directed toward developing the mineral deposits in the State other than iron ores.

The Minnesota School Mathematics and Science Center continued to develop and assemble curricular materials for primary and secondary levels. The National Science Foundation is supporting the Minnesota Mathematics and Science Training (MINNEMAST) Project with annual grants of \$1.3 million. By the end of the biennium, first trial drafts of mathematics materials for grades kindergarten through three and of science materials for grades kindergarten and one had been produced. Careful experimentation with these materials in the schools will provide the basis for their revision and incorporation into a coordinated mathematics-science program. Ancillary projects being undertaken by the Center are the development of a geometry course for prospective high school teachers and of a secondary school course in applied mathematics.

The St. Anthony Falls Hydraulic Laboratory was engaged in nearly thirty-five different research projects during the biennium. Important among these was a project related to the thermal power plant being built by Northern States Power Company on Lake St. Croix near Bayport, Minnesota. The design of the outlet channel which discharges warm water from the condenser system into the river was studied with the objective of minimizing changes in river temperature.

□ RESEARCH IN THE COLLEGE has been supported by funds from the Experiment Station, the National Institutes of Health, the Atomic Energy Commission, the U.S. Department of Agriculture, and others. A study on the occurrence of lymphatic leukemia in Minnesota and its transmissibility between species was one type of research conducted by the College of Veterinary Medicine. Projects on airsacculitis and other diseases in turkeys are important to the turkey industry. Research is being continued on brucellosis, certain neurological diseases, and diseases of food-producing animals. This research and the service of the Diagnostic Laboratory lead to better control of many of these diseases.

**College of  
Veterinary  
Medicine**

## **PUBLIC SERVICE and EDUCATION**

□ SERVICE is the part of University activity that connects teaching and research with all of the people of the State. Through this third major division of its endeavors, the University of Minnesota becomes most clearly a state university. In a number of ways, findings and developments of nearly all departments are made known and available to interested persons outside of the University. Especially during this biennium, more and more citizens of the State have come to recognize continuing ties with their University. The "education explosion" is beginning to have its effect in the area of public service.

### **Agricultural Extension Service**

□ THE NETWORK OF SERVICE in Agricultural Extension is maintained by over 225 agents in 90 county offices. Nearly one hundred supervisory staff members and specialists, most of whom also hold appointments in the academic units of the Institute of Agriculture, support this program.

Thirteen area meetings dealing with agricultural production, management, and natural resource use were held for retail dealers of seeds, fertilizer, and pesticides. Over 1,000 persons received the latest information on residues, pesticide safety, and related topics. Also held were thirteen Crops and Soil Workshops, thirteen dairy seminars, and courses in poultry and livestock management, maple syrup production, and farm and home development. Much staff effort was devoted to 68 dairy, swine, and beef enterprise schools and tours which reached more than 3,500 persons, and to over 450 demonstrations attended by nearly 2,500 people.

Community resource-development activities included two leadership development meetings, attended by more than 150 community leaders, and assistance in preparing Overall Social and Economic Development Plans in several counties. By the end of 1965, 26 counties had OSEDP's and 17 counties had completed comprehensive plans.

Consumer Protection Forums were held at seven locations, with approximately 550 in attendance. The extent and limitations of protective and informative services provided by government-, business-, and consumer-sponsored agencies and organizations were discussed. Three Consumer Clinics for more than 200 consumers attempted to increase understanding of various aspects of selling.

Home economics programs, conducted in all counties of Minnesota by 82 home economists, were held for more than 44,000 homemakers. Home economics leadership was provided for almost 30,000 youths in 4-H Club homemaking projects. Over 43,000 contacts were made with adults and youths in the family living program.

The preparation and distribution of information is a major responsibility of the Agricultural Extension Service. Over a million copies of formal bulletins, folders, pamphlets, periodicals, and special reports were distributed during the biennium. Also, over 1,100 separate news stories and features for radio, newspapers, and magazines were prepared. Radio programming has increased ten percent, with 1,400 different programs for 19,800 station broadcasts. Total radio broadcasts, including those by 14,052 home agents, represented an average of 50 hours per week from the University's Institute of Agriculture. Further, Agricultural Extension personnel arranged, or participated in, 245 television programs which were presented a total of 500 times.

□ THIS NEW OFFICE was established in 1964 to strengthen on-campus programs and to provide direction for overseas projects in agriculture and related fields. Particular emphasis is being placed on world food problems. In this regard, the first Minnesota Winter Seminar on World Food Problems was held in 1966. The principal overseas activity of the Office is a Ford Foundation-supported project in Chile. The objective of the project is to assist the government of Chile in expanding national food production, primarily by accelerating the flow of technical knowledge from experiment stations to farmers.

## **Office of International Agricultural Programs**

□ FORTY-SEVEN SHORT COURSES, with an attendance of 13,653, were presented on the University's Twin Cities Campus by the Department of Agricultural Short Courses during the second year of the biennium. In addition, 43 short courses, with an attendance of 8,431, were held at the University's branch experiment stations, and 18, with an attendance of 1,249, were held at other locations throughout the State.

## **Agricultural Short Courses**

The Department also planned and administered a wide variety of educational programs for 316 students and visitors from 44 foreign countries; planned and conducted 281 educational tours for 11,782 persons; and served as a conference-coordinating center for the St. Paul Campus. The branch experiment stations hosted a total of 10,000 visiting persons and provided facilities and services for 208 continuing-education activities involving 23,485 persons during 1965-1966.

The most significant special conferences and programs presented by the Department of Agricultural Short Courses during the second year of the biennium were the Upper Midwest Conference on Industrial-Commercial Exports, a Graduate-Professional Improvement Program, and the Upper Midwest Conference on Agricultural Export Trade.

□ EDUCATION FOR EDUCATIONALLY HANDICAPPED children and youth was surveyed by an ad hoc committee which studied the involvement of college faculty in this area and identified 46 separate projects. This involvement ranged from supervision of student teachers in schools serving disadvantaged children to federal, state, and regional consultantship service for Project Head Start, Job Corps Centers, Project Motivation, and Upward Bound. The College has cooperated with the Minneapolis Youth Development Council, Youth Training Incorporated, and a variety of other organizations outside the University, as well as with many units within the University, in service activities for educationally handicapped children and youth.

## **College of Education**

## **General Extension Division**

IN ADDITION TO THE MANY SERVICES offered through conferences, institutes, and workshops, an expanding program of continuing education in law, business, medicine, and engineering and science is being offered by the Extension Division. The citizens of the area have available to them further Extension resources through radio and television; drama advisory, counseling, and audio-visual service; the State Organization Service; the World Affairs Center; the Municipal Reference Bureau; and many other units.

### **AUDIO-VISUAL EXTENSION SERVICE**

This Service studies and teaches the use of audio-visual techniques and materials, and supplies such materials as films and tape-recordings to various groups throughout the State. During the biennium, the Service furnished 146,223 visual programs to 6,206 communities.

### **CIVIL DEFENSE EDUCATION PROGRAM**

In 1965-1966, the State of Minnesota led the nation in the number of conferees attending Civil Defense Education conferences for elected and appointed officials. That year's total was 1,699; the total for the biennium was 3,200. The program is financed by a federal contract with the Office of Civil Defense, Department of the Army, and is carefully planned and conducted in coordination and cooperation with the Minnesota Department of Civil Defense.

### **DRAMA ADVISORY OFFICE**

The Drama Advisory Office serves the numerous collegiate, secondary, and community theatre groups throughout the State. Especially important is the Loan Play Library, which made scripts available to more than 2,000 directors of plays during the biennium. Further, the Office was involved in workshops and various consulting activities for several theatre groups in the Twin Cities.

### **MUNICIPAL REFERENCE BUREAU**

The work of the Bureau is closely tied to that of the League of Minnesota Municipalities. Staff, space, and activities are all shared. Emphasis during the biennium was on regular service in the preparation of reports and surveys for municipal officials, especially in the field of legislation. A newly approved program is to provide in-service training for governmental employees.

### **STATE ORGANIZATION SERVICE**

The State Organization Service provides clerical and administrative services for its member Minnesota voluntary associations. By assisting these organizations in the administration and management of their affairs, the Service releases time of State leaders for carrying on the educational work of their organizations. An inventory-directory of over 300 Minnesota voluntary associations is kept up-to-date and available for educational purposes. The Service also has served as a research laboratory for various studies.

## **WORLD AFFAIRS CENTER**

The activities of the World Affairs Center are numerous and broad. For instance, during the biennium, the Center cooperated with five other universities in the Eighth Midwest University Seminar on U.S. Policy Towards Latin America. Further, a Minnesota Conference on Communist China drew opinion leaders from all over the State. The three-day residential meeting was partially supported by the Office of International Programs and the Cargill Foundation of Minneapolis. As part of its regular continuing program, the Center provides advice on speakers and audio-visual aids and operates a Pamphlet Shop. The staff is called upon frequently to speak, to participate in radio and television programs, to teach, and to consult with voluntary and governmental organizations.

THE STAFF OF NATURALISTS associated with the Museum continues to meet the increased demands for naturalist services in the various State parks. During the biennium, seventeen self-guiding trails served 150,750 visitors; nine additional trails are being built. Six naturalists serving in six State parks personally conducted trail walks, auto caravans, and boat trips serving 30,000 park visitors. These naturalists conducted illustrated evening programs attended by 75,000 guests. Eight park museums were visited by 360,000 visitors.

In the Museum itself, Sunday programs were attended by 10,515 visitors, an average of 526 per program. Museum guides conducted 899 groups, a total of 26,222 students, through the Museum during the biennium. Also during this period, 357 groups, totaling 16,653 students, were guided by their own teachers.

THE DEPARTMENT OF POLICE continued its program of serving other law enforcement agencies by conducting polygraph examinations for them. A total of 335 subjects were examined for 57 separate law enforcement agencies. As a result of this service, many thousands of investigative man-hours were saved by these referring agencies.

THE CULTURAL OFFERINGS of the University continued to be numerous and varied, attracting audiences of all ages and from all parts of the area. Increasingly, the University is becoming a prime supporter of culture for the Upper Midwest.

## **ARTISTS COURSE**

The 46th and 47th seasons of the University Artists Course brought an average of more than 4,000 people to Northrop Auditorium for each concert. Included in the Artists Course were the Masterpiece Series, the Celebrity Series, and the special concerts presented throughout each year. There were 22 paid events in 1964-1965

## **Museum of Natural History**

## **Police Department**

## **CULTURAL ACTIVITIES**

## **Music and Drama**

and 25 in 1965-1966. Attendance for the first year of the biennium was 91,759, and for the second year, 107,967. Some of the highlights were the appearance of Marian Anderson for one of the concerts on her farewell tour, the presentation of the Helsinki University Chorus, and the North American debut of Nicolai Petrov, second-place winner in the first Van Cliburn Competition. Significant among special programs were a production of *Carmina Burana* and a highly successful presentation of Tchaikovsky's *Nutcracker*, featuring the Contemporary Dancers, just before Christmas, 1965. Other artists such as Roberta Peters, Artur Rubinstein, and Andres Segovia and groups such as the Ballet Folklorico, the Norwegian Festival Orchestra, and the New Christy Minstrels drew capacity or near-capacity crowds to Northrop. Again this biennium, the Variety Club Heart Hospital benefited from the proceeds of the Annual Parade of Barbershop Quartets. The total donation was \$82,302.94

#### **METROPOLITAN OPERA**

Two highly successful seasons of Metropolitan Opera were presented during the biennium. For the 1965 season, five of the six operas were sold out in the mail order campaign, and the sixth opera, Gian-Carlo Menotti's *The Last Savage*, had less than 100 tickets remaining by curtain time. In 1966, all six operas were sold out during the first two weeks in which tickets were available. The Upper Midwest season of opera is still the only one held on a university campus. Nearly half of those attending are from outside the metropolitan Twin Cities area. The committee of management is composed of members from seven states and from three provinces of Canada, thus bringing the service of the University of Minnesota, the Minnesota Orchestral Association, and the guarantors to the wide area of the Upper Midwest. The income after expenses is divided between the Minnesota Orchestral Association and the University of Minnesota.

#### **CULTURAL PROJECTS FUND**

The Special Cultural Projects Fund, to be known in the future as the University of Minnesota Cultural Projects Fund, is supported by contributions from any net income from the annual Metropolitan Opera season. Special events supported by this fund were the presentation of *The Lord is Lord* as a highlight of the Brotherhood of Faiths Choral Concert during Religious Emphasis Week in 1965 and the premiere of a film version of the James Joyce novel *Finnegan's Wake*. Further, during each of the two years of the biennium, the deficit incurred in the presentation of the Bach Festival was made up by this fund.

#### **SUMMER MUSIC**

During summer session in 1965, two admission concerts, the Royal Ballet from London and a Maurice Chevalier concert, were presented by the Department of Concerts and Lectures. During the final month of the biennium, the new and long-awaited project employing Minneapolis Symphony members as teaching members of the summer session began with a four-week schedule.

#### **MINNEAPOLIS SYMPHONY ORCHESTRA**

The University of Minnesota continues to be the home for the Minneapolis Symphony Orchestra. As the only major orchestra in the world with its home base

on a university campus, the Symphony Orchestra provides unique musical opportunities for students and faculty as well as providing a continuing series of concerts for the general public. University students are involved with the Orchestra in several ways: the ushers for concerts are students, and on occasion the Symphony Orchestra performs with the University's Glee Club. In addition, several members of the Orchestra serve as teachers in the Music Department, providing a high caliber of professional training for students.

## UNIVERSITY THEATRE

□ During the 1964-1965 season, 66,330 persons saw 233 University Theatre performances; 60,786 saw 251 performances during the 1965-1966 season. Three plays were presented each year in the University Theatre's Classic Series. These productions offered the student and the public the opportunity to become familiar with many historically important works which are seldom produced today, but which still provide interest and entertainment. The Playwright's Premiere Series presented three new plays a year by Minnesota playwrights, many of whom were graduate students in Theatre Arts. These productions were generally directed by graduate students and were presented in the Shevlin Hall Arena of the Studio Theatre.

Young People's University Theatre presented two plays each year: one in the fall, the other in the spring. At least ten specially scheduled performances of each play were presented in Scott Hall Auditorium for fifth graders from Twin City elementary schools, often bringing the children in contact with living theatre for the first time. Three public performances of each production were also presented in order to reach other young people.

Other series are the Scott Hall Auditorium Series, ranging from Shakespeare through musicals and experimental and original drama to modern contemporary works; and the popular Centennial Showboat Series, presenting plays in repertory from the end of May through August.

Again during this biennium, outside interest and support have enabled the University Theatre to carry on a thorough program of advanced training and experimentation. The McKnight Foundation Graduate Theatre Fellowships make possible graduate study at the University and internship with the Minnesota Theatre Company. The Office for Advanced Drama Research, under a grant from the Rockefeller Foundation, has in the past three years brought to the State twelve new playwrights, who have been provided developmental rehearsals and audiences for their previously unproduced works.

## UNIVERSITY GALLERY

□ The Gallery exhibited works by artists of international, national, and local repute. Viewers in the Gallery this biennium saw the works of artists such as Toulouse-Lautrec, Robert Motherwell, and Pierre Alechinsky, as well as exhibitions of paintings, photographs, and pottery by faculty and students. The Gallery was also active in acquiring new works for its permanent collection. Added to the collection were sculptures by Alexander Liberman, Peter Agostini, and Jacques Lipchitz; drawings by Walter Quirt, Joseph Stella, Elie Nadelman, and George Of; and a series of litho-

**Art**

graphs representing work by Marisol, Robert Motherwell, Larry Rivers, and others. A new gallery for the University collection is part of the plans being developed for the West Bank.

## Special Lectures and Symposia

□ THE TRADITION of weekly convocations was brought to a conclusion during the biennium. The competition for students' time and the increasing cost of presenting quality speakers and programs prompted the decision to limit convocations to three per academic quarter, beginning in 1966-1967. Speakers appearing during 1964-1965 included Carl Rowan, Max Freedman, and astronaut Donald Slayton and during 1965-1966, Douglas Campbell, Max Shulman, William Arrowsmith, Alistair Cooke, and Winston S. Churchill, Jr.

The Department of Concerts and Lectures continued to cooperate with interested community organizations and businesses in bringing special lectures and lecture series to the Campus both for students and for the general public. The Honeywell Engineers Lecture Series was presented in cooperation with the Institute of Technology each of the two years of the biennium. WCCO Radio and Television and the Minnesota Student Association cosponsored the Minnesota Symposium in 1965, and the MSA presented a speaker in 1966 under the same title.

Foreign correspondents of the National Broadcasting Company were brought to the Campus in January, 1966, by KSTP Radio and Television and the Department of Concerts and Lectures. The Church of Christ, Scientist, churches of the area worked with the Department in bringing Edwin Canham, editor of the *Christian Science Monitor*, to speak in Northrop in May, 1966.

## University of Minnesota, Duluth

□ NOVEMBER 5, 1965, marked the culmination of two significant projects at the Duluth Campus—the unveiling of the bronze statue of Daniel Greysolon, Sieur du Luth, sculpted by Jacques Lipchitz, and the dedication of the Alice Tweed Tuohy Room, a major addition to the Tweed Gallery. Funds for the statue and site, designated as Ordean Court, were provided through the will of the late Albert L. Ordean. Participating in ceremonies of the day were Mr. Jacques Lipchitz, Mrs. Alice Tweed Tuohy, President O. Meredith Wilson, Mr. Emmons Collins, Dr. John Walker, and Provost Raymond W. Darland.

## University of Minnesota, Morris

□ NUMEROUS CULTURAL EVENTS on the Morris Campus provided a stimulus to fine arts at the school and in the region. The Artists Course offered concerts, convocations, fine-art films, art exhibitions, dramatic performances, and orchestra and band concerts throughout the year.

In 1965, two new features were added to the annual Arts and Letters Festival. A book display in the art gallery of Edson Hall provided exhibits of rare volumes from the sixteenth to the eighteenth centuries, and the Office of Student Activities brought nationally known entertainers to the Campus as part of the Celebrity Series.

## Radio and Television

□ THE DEPARTMENT OF RADIO AND TELEVISION, a unit of the General Extension Division, serves the University and the area through Radio Station KUOM, through broadcast television, and through closed-circuit television. Among the services of KUOM is a course broadcast directly from the classroom each quarter. From October of 1965 through June of 1966, the course Humanities in the Modern World, given by Professor Robert L. Scott of the Speech Department and Humanities Program, was broadcast.

The Minnesota School of the Air marked its 25th and 26th anniversaries during the biennium. Approximately twelve 15-minute programs were presented each week of the academic year for use in schools. It is estimated that the School of the Air reached at least 50,000 children each week.

The Minneapolis Symphony Orchestra returned to KUOM after an absence of six years. A new agreement between the Minnesota Orchestral Association, the Minneapolis Musicians Association, and Radio Stations KQRS and KUOM enabled KUOM to record nine complete Friday evening subscription concerts in 1965-1966. These were edited and distributed by KQRS to some twenty stations in Minnesota and were broadcast in their entirety over KUOM during the summer of 1966.

The University began a three-year Television College experiment in September of 1964, offering courses for credit. In 1964-1965, nine courses were selected from the basic freshman curricula. This number was increased in 1965-1966 to 25 courses. Enrollees were expected to view two televised lectures per week and to attend one class meeting at a local study center. Two of the most significant developments in closed-circuit television were the following: a large-screen television projector was installed in Northrop Auditorium for use in teaching large psychology classes, and a classroom studio in the Aeronautical Engineering Building was equipped for televising to Rochester a program produced in conjunction with IBM.

□ NEW PUBLICATIONS issued by the Press increased in number during the biennium; this increase was accompanied by a sales volume exceeding that of the previous biennium.

## University Press

Plans were announced in the fall of 1965 for publication of a ten-volume series of historical studies to be called *The Age of European Expansion*. It is expected that the first volumes in the series will be published in the late 1960's.

The Press, in association with the Minnesota Theatre Company, established the Minnesota Drama Editions, a series of play publications edited by Sir Tyrone Guthrie. Emphasis is on publication of translations and adaptations of translations of European plays from all periods. The first volume in the series, Anton Chekhov's *The Cherry Orchard*, translated by Tyrone Guthrie and Leonid Kipnis, was published in June, 1965.

The book *Pioneers and Caretakers: A Study of Nine American Women Novelists*, by Louis Auchincloss, was published in June, 1965, and enjoyed unusually large sales and favorable reviews. It is being republished in a paperback edition by the Dell Publishing Company.

A number of Press publications were cited for honors during the biennium. The American Association for State and Local History cited *Minnesota: A History of the State*, by Theodore C. Blegen, for an Award of Merit in 1965. Honorable mention in the American Personnel and Guidance Association's 1965-1966 Re-

search Award Competition was given to *The Outcome of Counseling and Psychotherapy*, by Theodore Volsky, Jr., Thomas M. Magoon, Warren T. Norman, and Donald P. Hoyt.

## **STUDENT and ALUMNI ACTIVITY**

BESIDES ITS MAJOR FUNCTIONS of teaching, research, and service, the University carries on a number of programs which help fill in the spaces between its primary activities. These programs are in general directed toward advising and guiding the student through his years at the University. The physical and spiritual well-being of the student is always being considered, so that while he is here, and even after he leaves, the experience of the University may prove the beneficial one it was meant to be.

### **Orientation**

DURING THE BIENNIUM, more than 21,000 new students attended the two-day Orientation-Registration Program. Also, 1,590 attended Freshman Camps. During Welcome Week each year, approximately 2,000 parents met in Northrop Auditorium. Since orientation is designed to help the student in his college career, there is an increasing emphasis on Welcome Week activities that are concerned with adjustment to academic life.

### **Counseling**

A VARIETY OF COUNSELING PROGRAMS is available to students. During the biennium, 171 residence counselors assisted 7,200 students in 1964-1965 and 7,300 students in 1965-1966. These students included not only those living in residence halls, fraternities, sororities, and rooming houses, but also the members of fraternities and sororities who did not live in their respective houses.

A number of services are offered by the Speech and Hearing Clinic. More than 12,000 students were provided speech and hearing screening evaluations as part of the New Student Orientation Program. Individual consultations were arranged for those desiring help with personal speech and hearing problems and for those seeking information on the effects of speech and hearing problems on academic, vocational, and social functioning.

Also during the biennium, 525 students received over 9,200 sessions of therapy for problems such as articulation, stuttering, voice, hearing, and other organic conditions. The Clinic also works with foreign students, carries on a public-service program, and offers an evening program for persons who stutter.

Members of the Student Counseling Bureau advised 7,060 persons in 15,753 interviews, with a total case load of 5,798 during the biennium. Approximately 800 students took advantage of the packets of self-help material developed by the Reading and Study Skills Center. Also, an increase was noted in the use of materials provided by the Occupational Library.

□ THE UNIVERSITY STRIVES to provide needed assistance to its many foreign students. During 1964-1965, 1,601 such students were enrolled, representing 94 countries of the world. In 1965-1966, 1,810 students represented 96 countries. The Office of the Foreign Student Adviser, which was moved during the biennium to a location on East River Road, recorded 34,218 contacts in 1964-1965 and 38,496 contacts in 1965-1966. The help given usually concerns matters of regulations, financial assistance, and language problems.

## **Foreign Student Advising**

□ THE 409 STUDENT ORGANIZATIONS on campus raised some \$140,000 from over 2,000 charitable projects and drives. One hundred and nine student groups presented 222 human relations programs to audiences totaling 9,347 persons. In addition, students made 170 appearances before 17,754 persons for the promotion of interracial and interreligious understanding, for the support of American Indian education, and for the civil rights movement.

## **Student Organizations**

□ STUDENT USE OF THE HEALTH SERVICE continued to increase during the biennium. Visits for medical attention numbered 136,214 during 1964-1965 and 149,272 during 1965-1966. Professional dental services offered numbered 22,861 during the first year of the biennium and 24,508 the second. During 1964-1965, 74,085 laboratory procedures were performed, and 84,834 were performed during 1965-1966. Increases were also noted in the number of X rays taken (1964-1965: 12,440; 1965-1966: 14,423) and in the number of prescriptions filled (1964-1965: 43,096; 1965-1966: 51,769).

## **University Health Service**

One new project undertaken during the biennium was the organization by the health educator at the Service of two campaigns for blood donations by University students. Donations were made at University Hospitals' Blood Bank and credited to the Student Health account. Working through the Social Service Council, the health educator was able to find two student organizations which assisted in carrying out two separate campaigns for blood donors. As a result, not only was a deficit of 200 pints of blood erased, but at the end of the biennium there was a balance of 31 pints in the Student Health account.

Environmental health and safety are prime concerns of the Health Service. During the biennium, the staff was permitted to participate more extensively in the planning of new buildings and of major remodeling projects for existing buildings. The Division of Environmental Health and Safety continues to inspect off-campus student housing and to handle sanitation problems related to water supply, sewage disposal, food, swimming pools, and insect and rodent control. Other major concerns of the Division involve the collection, transportation, and disposal of chemical and biological wastes with toxic, carcinogenic, flammable, and radioactive properties.

## **Intercollegiate Athletics**

DURING THE SECOND YEAR of the biennium, the University of Minnesota athletic teams did not win any team titles, but they fielded two second-place squads and finished in the first division in all but two sports. In addition, a number of individual Gopher athletes performed outstandingly. The football team and the basketball team each placed a member on an All-American squad. Several members of other teams were named to All-Big Ten teams.

During the 1964-1965 academic year, 625 students received athletic coaching from members of the staff; in 1965-1966, the total was 658.

## **Student Unions**

THE TWENTY-FIFTH ANNIVERSARY of Coffman Memorial Union was observed during the biennium, with many of those associated with the Union, both past and present, gathering to share in the celebration. Throughout its history, the Union has been self-sustaining, through income from student fees, recreational activities, and auxiliary enterprises.

The Union is continually active. Through its Board of Governors, it annually sponsors over one hundred events with other departments and student organizations. In all, the Board conducted over 1,300 events during the biennium with an attendance of over 450,000. Use of Coffman Union increases each year. An average day finds more than 20,000 persons entering the building. Use by students of the St. Paul Union also increased, and will continue to increase with the larger enrollments on that Campus.

The Unions continue to offer all kinds of services for undergraduate, graduate, and nonstudent groups. The programs are varied enough to appeal to a wide range of interests. They ranged during the biennium from a soapbox forum to an exhibit of Kennedy memorabilia which attracted more than 62,000 persons.

## **Alumni Activity**

MEMBERSHIP in the Alumni Association increased by more than 2,000 during the biennium. Eighteen outstate chapters were visited, and chapters were organized in Akron, Ohio; Boston, Massachusetts; Florida; Hawaii; India; and Korea. The University of Minnesota Alumni Club in the Sheraton-Ritz Hotel completed two successful years of operation during the biennium. The Club has been well accepted by alumni. The Association continued to sponsor the St. Paul Quarterback Club, the Complimentary Athletic Program, the Complimentary University Theatre Ticket Program, Homecoming, football meetings, and the Golden Anniversary Reunion. The alumni magazine was published ten times each year, September through June. Special issues, a feature begun in 1965, dominated the character of the magazine in 1966. The Alumni Readers' Survey was continued both years, and in 1966 an Alumni Opinion Poll was initiated. Also during the biennium, new Articles of Incorporation and new Bylaws were adopted by the Association.

□ REAPPOINTED for six-year terms by the 1965 Legislature were Regents Charles W. Mayo, M.D., Rochester; Marjorie J. Howard, Excelsior; and Lester A. Malkerson, Minneapolis. At the same time, the Legislature appointed two new members to the Board: Regent George W. Rauenhorst, Olivia, was chosen for a six-year term; and Regent Albert V. Hartl, Fergus Falls, was given a four-year appointment. Former Regent Gerald W. Heaney, Duluth, who was appointed in 1964 to fill a vacancy, was not reappointed by the Legislature, and former Regent A. I. Johnson, Benson, who had been a member of the Board since April of 1959, did not seek reelection.

□ AT ITS MEETING on June 12, 1965, the Board of Regents voted to increase tuition and fees by \$60 per year. Of this increase, \$6.50 per quarter was added to the incidental fee and \$13.50 per quarter to tuition. At the same time, a \$100,000 scholarship fund was approved to aid students who were put at an extreme disadvantage by the increase.

□ THIS CORPORATION was formed in January of 1966 by six Twin Cities educational and medical institutions. The University has joined with Augsburg College, Fairview Hospital, Luther Seminary, St. Mary's Junior College, and St. Mary's Hospital in an effort to help plan the future of the common area surrounding these institutions and to seek joint solutions to problems. These problems relate to building and housing, business conditions, matters of crime and law, and health and traffic requirements and regulations. The Corporation will act as a clearing house and as a guide to responsible community development.

□ THE UNIVERSITY'S NEED for and recognition of high-quality teaching was made especially evident during the biennium with the creation of two new teaching awards. From funds made available by the Standard Oil Foundation, awards of \$1,000 each were presented to three distinguished contributors to the quality of undergraduate teaching: David Cooperman, Professor of Social Science; William A. Rosenthal, Professor of English; Kenneth E. Winsness, Associate Professor of Forestry.

The first Regents' Professorships were announced at the June, 1966, Commencement. Five professors, each of whom received a \$5,000 award, were recognized for the quality of their teaching, the scope and quality of their scholarly or artistic contributions, and their contributions to the public good: Ernst R. G. Eckert, Regents' Professor of Mechanical Engineering; E. Adamson Hoebel, Regents' Professor of Anthropology; Alfred O. C. Nier, Regents' Professor of Physics; Allen Tate, Regents' Professor of English; Owen H. Wangensteen, Regents' Professor of Surgery.

## **NOTABLE EVENTS**

### **The Board of Regents**

### **Tuition Increase**

### **University Community Development Corporation**

### **Teaching Recognition**

This report attempts to present a brief picture of the University and its activities. Those wishing more detailed information will find the following publications useful:

*University of Minnesota Biennial Report, 1964-1966*

*The Needs of the University of Minnesota (The Legislative Request, 1967-1969)*

*University of Minnesota: A Brief Summary of Financial Operations for the Year Ended June 30, 1966*

Please address your request for these publications to the Department of University Relations, 220 Morrill Hall, University of Minnesota, Minneapolis, Minnesota 55455.