

STANFORD UNIVERSITY BULLETIN

ANNUAL REPORT OF THE PRESIDENT
OF STANFORD UNIVERSITY

FOR THE FIFTY-SIXTH ACADEMIC YEAR
ENDING AUGUST 31, 1947

THIS BEING THE FORTY-FOURTH REPORT SUBMITTED, TO
WHICH ARE APPENDED THE ANNUAL FINANCIAL
REPORT, REPORTS OF SCHOOLS, DEPARTMENTS,
COMMITTEES, OTHER ADMINISTRATIVE
OFFICES, AND PUBLICATIONS OF
THE FACULTY

STANFORD UNIVERSITY
STANFORD, CALIFORNIA
PUBLISHED BY THE UNIVERSITY
1947

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THE BOARD OF TRUSTEES

[The figures in parenthesis indicate year of beginning of service.]

CHARLES R. BLYTH (1941)	Russ Bldg., San Francisco 4
JOHN E. CUSHING (1945)	215 Market St., San Francisco 5
LELAND W. CUTLER (1920)	Financial Center Bldg., San Francisco 4
LLOYD W. DINKELSPIEL (1947)	14 Montgomery St., San Francisco 4
GEORGE A. DITZ (1942)	Bank of America Bldg., Stockton
PAUL C. EDWARDS (1943)	812 Mission St., San Francisco 1
W. P. FULLER, JR. (1933)	301 Mission St., San Francisco 19
MRS. ROGER GOODAN (1942)	2440 North Vermont Ave., Los Angeles 27
HERBERT HOOVER (1912)	Stanford
IRA S. LILLICK (1923)	826 Robert Dollar Bldg., San Francisco 4
C. O. G. MILLER (1923)	433 California St., San Francisco 4
GEORGE MORELL (1944)	Box 368, Palo Alto
SEELEY G. MUDD (1946)	1206 Pacific Mutual Bldg., Los Angeles 14
HERMAN PHLEGER (1944)	111 Sutter St., San Francisco 4
M. C. SLOSS (1920)	111 Sutter St., San Francisco 4

OFFICERS OF THE BOARD

President: W. P. FULLER, JR.

Vice-Presidents: M. C. SLOSS, LELAND W. CUTLER

Secretary and Treasurer: IRA S. LILLICK

Assistant Secretaries and Assistant Treasurers: CHARLES R. BLYTH, PAUL C. EDWARDS

STANDING COMMITTEES OF THE BOARD

Investments: MILLER, BLYTH, CUSHING, LILLICK, PHLEGER

Finance: FULLER, CUTLER, DITZ, LILLICK, MILLER, MORELL, PHLEGER

Academic Affairs: DITZ, EDWARDS, GOODAN, LILLICK, MUDD, SLOSS

Medical School Representative: DITZ

Library Representative: GOODAN

Buildings and Grounds: MORELL, EDWARDS, GOODAN

Rules: LILLICK, PHLEGER, SLOSS

Nominations: SLOSS, DITZ, MILLER

Planning and Development: EDWARDS, GOODAN, HOOVER

Report of the President

1946-47

To the Board of Trustees:

Once again it is my privilege to report the major features of a year in the program of Stanford University.

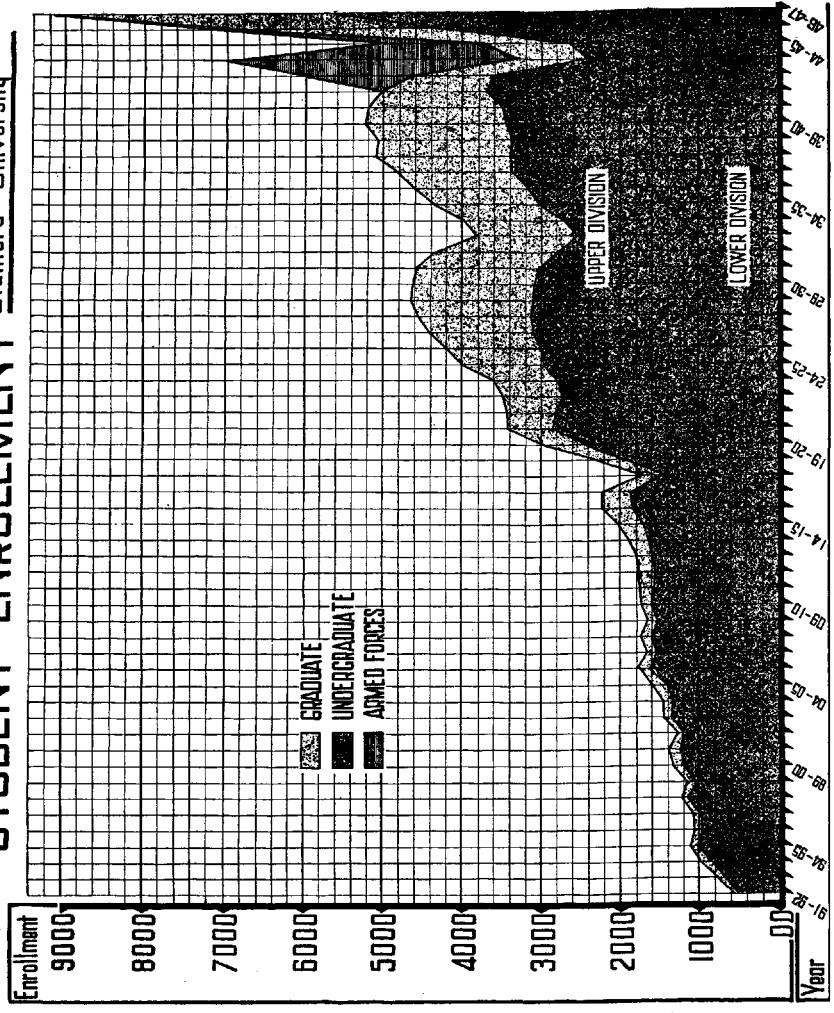
Enrollments

The 1946-47 academic year at Stanford was approached with some apprehension because of the overwhelming enrollment which it brought. The student body exceeded 7,000 students in each of the three regular quarters of the year. The 7,244 enrollment of the autumn quarter was almost unchanged in the winter quarter, which recorded the year's high of 7,249. In the spring quarter the total dropped to 7,077, while the summer brought what for that quarter was a new high of 3,139. Altogether, 9,145 different individuals were registered as students at some time during the year.

It is noteworthy that among the 9,145 enrolled there were 3,464 graduate students. During the summer quarter more than half the enrollment consisted of graduate students, while in the other three quarters they comprised roughly one-third of the total.

The proportion of students from outside California is steadily increasing. While in 1943-44 the out-of-state en-

STUDENT ENROLLMENT Stanford University



rollment among the civilian students was 22.8 percent of the total, the 1946-47 proportion was 29.7 percent. More than two hundred students were from abroad, coming from such varied points as Norway and Afghanistan, the West Indies, and Java.

The large enrollments are only a partial measure of the unprecedented number of applications for admission which are still coming. When in May 1947 the applications for the coming autumn quarter were reviewed, more than 8,000 students were applying, of whom only one in four could be taken.

We are frequently asked: "How long will the present peak enrollment at Stanford be maintained?" That question is not readily answered. Although we like to think that Stanford has a relatively stable enrollment, a study of our history shows that we have experienced a substantial variation over the years. To the present time, however, there has been an unchanging trend of growth. The graph on page 2 pictures the enrollment history over fifty-six years. Certain it is that if the plant, facilities, and endowments were adequate only for the smaller numbers, all are strained at the present time.

Program of Activities

New Programs

The departments of the University initiated several new or expanded programs during the year in addition to strengthening their existing activities.

The creative-writing program under the direction of Professor Wallace Stegner in the School of Humanities was given an unexpected impetus by the pledge of \$75,000 by Edward H. Jones to guarantee for five years a group of six \$2,000 Stanford Fellowships in Creative Writing and four \$500 prizes for excellence in writing in the short story, the novel, the drama, and poetry. Five of the fellowships for the 1947-48 academic year were awarded during the summer to a promising group of young writers.

In the Speech and Drama Department five fellowships were offered for the first time to a group of junior artists-in-residence. This program is supported in part by a grant from the National Theater Conference. It serves the double purpose of having students work directly with young actors and theatrical technicians who have had successful professional experiences, and at the same time affording the fellowship holders further opportunity for study and growth.

The revised program in International Relations in the School of Social Sciences attracted sixty-two students, including twenty at the graduate level.

The Hoover Institute inaugurated the research fellowships for Slavic studies which were made possible by a \$200,000 grant from the Rockefeller Foundation. Ten scholars held fellowships during the year. During the terms of their research in the Hoover Library, they participated in a Slavic Seminar in which reports of their current research were presented and discussed.

In the School of Medicine an Eye Bank was organized and placed successfully in operation. This has given to the West a center for collecting and distributing corneas for corneal transplantations. In its first six months it registered more than 500 donors and furnished corneas for fifteen transplantation operations.

School of Mineral Sciences

In November 1946 the Board approved the creation of a School of Mineral Sciences. This new school began to function immediately under the leadership of Dean A. I. Levorsen. It includes two departments—Mining Engineering, which was transferred from the School of Engineering, and the Department of Geology, which was formerly a part of the School of Physical Sciences.

The School of Mineral Sciences is developing programs in close co-operation with practicing mineralogists and geologists. With the active interest of the Geology and Mining Associates, it has been possible to make marked strides in re-equipping and extending the laboratories of the School.

The extensive mining and petroleum interests of industry and government in the West have long needed a professional school to serve their technical needs. The increased enrollment of graduate students in the departments comprising the School of Mineral Sciences reflects a prompt recognition of the service which the School can provide.

Organized Research

During the year the research projects which were begun in the preceding year after the return of many of our faculty from wartime assignments elsewhere, took on even more substantial proportions. Altogether during the year we expended more than \$1,000,000 on organized research. Over \$600,000 of this consisted of research under contracts placed with Stanford by the federal government. The total dollar value of contracts in effect during the year was \$1,637,679. Slightly more than \$600,000 of this total represents commitments for the following year.

Most of the research projects undertaken contribute directly to the fundamental scientific interests and purposes of the departments involved. Such research activities have added much to the quality of instruction given to graduate students in engineering and science. Not only have the research efforts of the faculty been facilitated by contracts, but many of the graduate students have been brought directly into the contract program.

Contract research has been undertaken in the Schools of Engineering, Physical Sciences, Medicine, Biological Sciences, Social Sciences, and Mineral Sciences, of which the first three named have carried the major amounts.

It is, of course, impossible in this brief report to take note of all the extensive research projects being carried on in the faculty. These activities, however, are of primary significance in the appraisal of the true intellectual vigor of the University. The mention of a few of them can at

least provide some understanding of their scope and import.

In the Physics Department, for example, Professor W. W. Hansen and his associates have designed and constructed a successful electron linear accelerator, a type of "atom-smasher" which offers previously unrealized possibilities in nuclear fission and the study of cosmic rays. This type of accelerator is less elaborate and expensive than the cyclotron and presents dramatic prospects for greatly increased energy through simple extension of its length.

In the field of bacteriology Professor E. W. Schultz has made significant progress in the identification and cultivation of strains of poliomyelitis virus. This is only one of a wide range of studies being conducted in the field of virus diseases.

In biochemistry Professor H. S. Loring's related efforts have led to successful immunization of cotton rats against the Lansing strain of poliomyelitis virus, offering hope that it may some day be possible to develop a vaccine effective against infantile paralysis in humans.

In the School of Engineering, Dean F. E. Terman's notable leadership has developed the vigorous research program which extends into all divisions of the School. One example of its results is the improvement of the new traveling wave tube achieved by Professor L. M. Field and associates, which will make possible previously unknown efficiencies in electrical communication systems.

In the field of social sciences, the Food Research Institute under the direction of Professor M. K. Bennett is carrying forward a \$300,000 program of research to complete a twenty-one volume International History of Food and Agriculture in World War II, which will bring together the work of a panel of authors drawn from around the world.

These and many other formal and informal projects of research on the frontiers of science are continually adding to human welfare and rendering service to the student and to society.

Stanford Research Institute

During the year the Stanford Research Institute has been formed to provide a center for sponsored industrial research in the West, handling especially those types of applied research which the faculties of academic departments of a university cannot properly undertake.

In the course of the year the Institute has assembled a strong staff of scientists and has accepted contracts for research in a variety of fields. Under a contract with the Navy Department, the Institute directed research on guayule as a source of rubber at the Salinas experimental farm and laboratories developed during the war by the government. A major project to study the causes and control of smog in Western industrial centers was launched. A taste laboratory was established to serve food processors and manufacturers with scientific ap-

praisals of the taste-acceptability of new products. Another project undertaken for the government is a study of the expansibility of the aircraft industry, a matter of strategic importance in national security planning.

Military Programs

The Department of Military Science and Tactics, under the leadership this year of Colonel Basil H. Perry, included for the first time courses in the Air Corps and Quartermaster Corps. The Field Artillery and Ordnance courses were continued as well. The enrollment for the year was low, but the Stanford unit was rated as "Excellent" in the annual War Department inspection.

The Stanford Naval ROTC unit, under Captain C. E. Crombe's direction, concluded a successful program in its first year of operation under the Holloway Plan. Out of forty-nine college and university NROTC units in the entire country, the Stanford group ranked second in a standardized examination of first-year midshipmen conducted by the Bureau of Naval Personnel of the Navy Department. The Stanford average score was 151.58, only nine-hundredths under the 151.67 average of the top unit. The nation-wide average was 133.74, and the lowest unit average was 96.0.

At the request of the Navy Department the School of Naval Administration was continued under the joint direction of Professor H. H. Fisher, Chairman of the Hoover Library and Institute, and Captain C. E. Crombe of the

Department of Naval Science and Tactics. Two five-month courses were given to a total of fifty-two naval officers ranging in rank from ensign to captain, all of whom were being prepared for duty in the military government of the Pacific Islands, which are now under Navy control.

A new course of training in personnel administration was organized by Dean A. J. Bartky of the School of Education in co-operation with the Department of Naval Science and Tactics to train selected naval officers in the methods and techniques of personnel management.

The Museum and Art Gallery

At the start of the year the Leland Stanford Junior Museum and the Art Gallery were brought into the newly created Department of Art, with Professor R. N. Faulkner as executive head. The collections of the Museum, which had over the span of fifty years become disorganized and scattered, have now been completely reinventoried and classified. The Museum will, however, remain closed while work goes forward on cataloguing, documentation, and necessary restorations of the individual items. We look forward to its reopening, when it can again serve effectively its original purpose of making an outstanding contribution to the appreciation of the culture of the world.

The Art Gallery was brought more fully into the life of the Stanford community. Throughout the year it fea-

tured a series of varied art displays which were closely related to the program of instruction, public exercises, and observances of the University. The attendance at the exhibitions totaled over 21,000 for the year.

Conferences and Public Exercises

An extensive schedule of conferences and public programs was offered during the year. It was drawn to a climax by the Commencement season during which the Baccalaureate address was delivered by Dr. T. V. Smith, of the University of Chicago, and the Commencement address by Dr. L. A. DuBridge, president of the California Institute of Technology.

Seventeen major conferences met on the campus. Among them were meetings of the American Physical Society, a special summer Conference on Ammonia Chemistry, the Stanford Education Conference, the annual Stanford Business Conference, and the Institute of the Association of Western Hospitals. The Associated Students sponsored a Conference on International Relations for the benefit of members of the student body.

The Tuesday Evening Series presented 37 public programs to a total attendance of 28,786 persons. Ten of these were lectures or concerts by members of our faculty; the rest featured visiting scholars and artists.

The School of Education organized a series of seven Thursday Evening Education Lectures which were open to the public. A Hispanic Series of four lectures was pre-

sented by the Committee on Public Exercises and the Committee on Latin-American Studies.

A varied program of musical events included six concerts of chamber music which the Friends of Music at Stanford presented in collaboration with the University. The presentation of Mozart's *Così fan Tutte* by the Intimate Opera Players under the direction of Professor H. J. Popper will long be remembered in the community. The concert series sponsored by the Associated Students continued to bring to the campus some of the world's leading artists.

Honors

Of the many honors which have come to members of the faculty, only a few can be cited here.

Professor Emeritus S. P. Timoshenko, who continued this year to carry a part-time teaching load, was awarded the James Watt International Medal by the Council of the Institute of Mechanical Engineers of Great Britain. He is the second American to receive this honor.

A. I. Levorsen, dean of the newly formed School of Mineral Sciences, was awarded an honorary Doctor of Science degree by the University of Minnesota and was elected president of the Geological Society of America. Professor P. H. Kirkpatrick was chosen to head the American Association of Physics Teachers.

Professor George Polya was elected a foreign member of the mathematical section of the French Academy of

Sciences, becoming one of three living American mathematicians to hold this honor. Professor Cornelis B. van Niel was one of the small group of distinguished scholars awarded honorary doctorates by Princeton University in connection with the Bicentennial celebrations.

Dean M. K. Bennett of the School of Social Sciences was one of six scientists picked by the National Academy of Sciences on request from the War Department to study and advise General MacArthur and the Japanese on the democratization and development of Japanese science and technology.

Dean Douglas M. Whitaker and Professors L. R. Blinks, George S. Myers, and Gilbert M. Smith, all of the School of Biological Sciences, constituted a substantial part of the staff of the Bikini Scientific Resurvey, sponsored by the United States Navy during the summer months to determine the effects after a year of the atomic bombs which were exploded in the Bikini lagoon.

Degrees

The University awarded 2,003 degrees during the year. Of these, 1,244 were at the baccalaureate level and 759 were advanced degrees.

The Students

The accomplishments of students have fully justified our belief concerning their scholarship in comparison with

previous college generations. The scholastic average of the undergraduate student body as a whole for the autumn, winter, and spring quarters was higher than for the previous year.

Most noteworthy was the work of the men students. Combining a serious and mature group of veterans with the most rigidly screened group of direct high-school graduates, the men's group raised their average from the previous year's 2.49 to an all-time high of 2.55. It is significant that the veterans, returned after several years away from academic pursuits, more than held their own. The large contingent of married students held an edge over the nonmarried group.

Extracurricular Programs

The students returned to an active, well-rounded program of extracurricular activities. The presence of many married students, the wider range in ages, and the lesser interest of the veterans in traditional campus activities, as well as the smaller proportion of the student body in residence on campus, affected the general pattern, but were not disruptive in any sense.

Health

The Student Health Service completed its first full year of operation under the revised plan which provides full medical and hospital care to the students. A refinement of the plan worked out under the contract with the

Palo Alto Clinic makes it possible for a student to select a physician not available through the Health Service if he should so choose.

Dr. George H. Houck, director of the Health Service, reports that students are taking full advantage of the availability of the service, and that students were seen on the average more than seven times each during the year by physicians or nurses of the staff. The incidence of infectious disease was very low during the year, and the general health of the student body was unusually good.

Athletics

The heavy enrollment of men brought the physical education and athletic programs to a new level of activity. Intercollegiate sports were renewed in full. Active intercollegiate sports included football, basketball, baseball, track and field, tennis, swimming, golf, fencing, rugby, boxing, soccer, and wrestling. The intramural athletic competition was particularly noteworthy for the number of men participating.

The women's physical education program included a wide variety of sports and recreational activities. Modern dancing and folk dancing attracted a large participation.

The new courses in equitation for both men and women have introduced instruction in a form of outdoor recreation particularly favored by our extensive campus.

Stanford Village

A report of the past year would not be complete if it failed to give specific attention to the achievements at Stanford Village, our emergency residence area. This adaptation of the former Dibble General Hospital in Menlo Park was developed with close co-operation from the officials of the Federal Public Housing Authority.

Before the end of the year the Village included 319 apartments and accommodations for approximately 1,500 single students. Community facilities which serve the residents include a self-service laundry, barber shop, kindergarten and nursery school, grocery store, meat market, accommodation store, haberdashery, post office, bowling alley, library, and soda fountain. Co-operative self-government of the students in the Village has developed readily.

In some respects the *esprit de corps* of the Village has exceeded that of the campus residences. The ready recognition on the part of the students of the value of close co-operation in the development of a stable community has been of utmost importance. The work of the Village manager, Mr. Dwight Adams, the Village counselor, Mr. Herbert Wunderlich, and their several assistants has contributed in large part to the effectiveness of this program.

The University Plant

Improvements

The continued instability of the construction market made it impossible to go forward before the end of the year with any major construction projects. However, as the year drew to a close, a contract was let for the construction of Crothers Hall, the dormitory for graduate students in law, which will be ready for occupancy in the autumn of 1948.

We hope that conditions will soon be favorable for the remodeling of the present Administration Building into new quarters for the Law School and for the construction of administrative offices based upon the present Law Building and President's Offices. The drawings for the Law School project are completed and in hand.

Funds are also available for the construction of Lucie Stern Hall, an undergraduate men's dormitory. This project was made possible by the gift from the estate of Mrs. Lucie Stern.

New studios for the Department of Art were developed by enclosing sections of the arcade on the northeast side of the Art Gallery. This improvement has made it possible to relate the teaching program of the Department more effectively to the facilities of the Gallery.

Board authorization made it possible to proceed with the installation of a completely new electrical substation and distribution system for the campus which will be

completed at a cost of nearly \$175,000. Approval was also given to a project to expand the water system to take care of the greatly increased demand which has been placed upon existing facilities. Other repairs and improvements to campus facilities were also authorized toward the end of the year.

Space Utilization

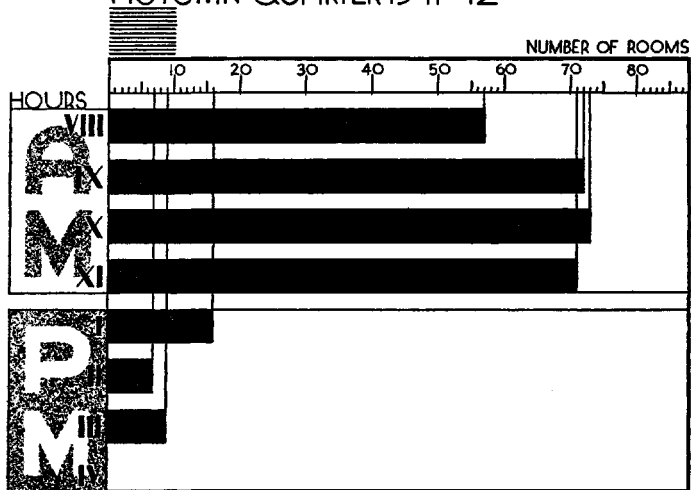
The large increase in enrollment naturally required the scheduling of many more classes and laboratory sections than ever before. The concurrent increase in teaching and administrative staff also placed a strain on office facilities. Both problems have been met, though our office allotments for faculty and staff in several areas leave much to be desired.

The classroom and laboratory pressure was met by extending the length of the teaching day. The afternoon periods were heavily scheduled with lecture sections; and laboratory sections, which in prior years met principally in the afternoons, were spread into the morning hours as well. By these means and by the use of the temporary prefabricated buildings secured through the Federal Works Agency, we have been able to avoid the undesirable necessity of carrying classes into the evening hours. The charts on the opposite page demonstrate the manner in which better scheduling enabled us to accommodate the expanded schedule of classes.

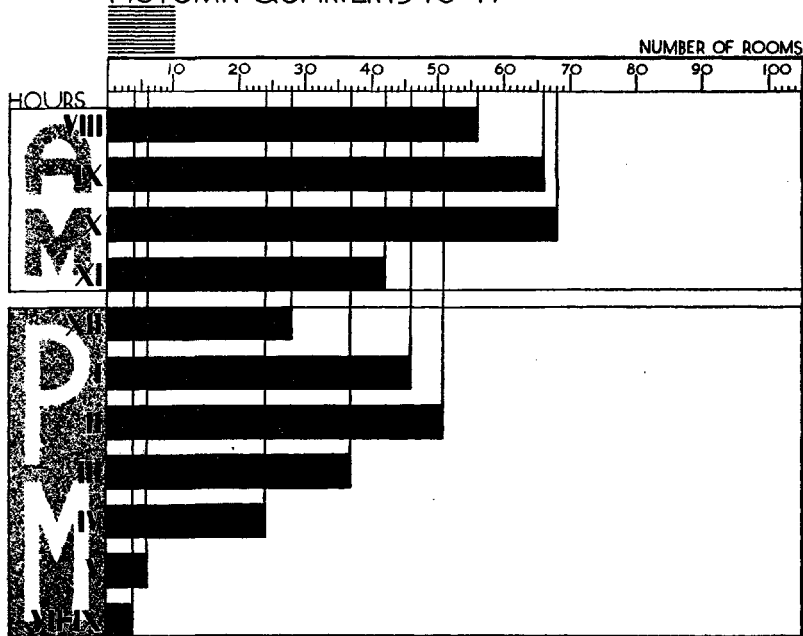
To care for the expansion of the departmental staffs,

CLASSROOMS IN USE DURING EACH HOUR OF A MAXIMUM DAY

AUTUMN•QUARTER•1941-42



AUTUMN•QUARTER•1946-47



a considerable program of moving and regrouping of offices was carried out. The Psychology Department was moved into offices in the Education Building and provided with new laboratories constructed in previously unused sections of the basement of that building. The Department of Music was moved to the former president's home, the Knoll, where it enjoys more adequate office, classroom, and practice-room facilities than previously. The Student Health Service consolidated its quarters in one wing of the Women's Gymnasium, making available its previous space in the Athletics Building for the use of the NROTC unit and the Speech Clinic.

As the psychology laboratories neared completion at the end of the year, it became possible to move the Department of Germanic Languages to quarters on the northeast corner of the outer quadrangle, thereby making additional space available for the Law School Library and offices.

Finances

Stanford has shared with all endowed institutions a gradually declining rate of return from endowment investments. This has been offset in a measure by an increased tuition income and by the continuing gift program. The relatively smaller growth of overhead costs has enabled the University to maintain its standards and to make a

small beginning on the improvements in plant and equipment which had necessarily been neglected during the war years.

The Board was able to approve further adjustments in salaries effective September 1, 1947, particularly in the lower brackets. Individual increases were also approved for many positions at the higher levels.

The Board succeeded in avoiding any further increases in tuition rates. Board and room rates likewise were maintained unchanged for the opening quarter of the new year, though the likelihood of being able to carry through the entire year without an increase in the board rates appeared very doubtful.

At the close of the year, the financial report showed a surplus of \$79,648.05, an increase of \$18,667.64 over the surplus on the books at the beginning of the year.

Gifts

Gift support again proved to be the means of bridging the gap between necessary current expenditures and income from all other sources. At the same time, many gifts of the year have made possible the carrying through of some of the projects which have long been outlined for development at Stanford. The University's appreciation to all those who participated during the year can hardly be overemphasized.

It was with real satisfaction that we noted that the

large number of donors in 1945-46, which was more than double that of any previous year, was matched in 1946-47. Thus we have reason for believing that the phenomenal increase in the number of donors, beginning in 1945-46, is a mark of sound growth in the support by Stanford friends and not an isolated phenomenon of that year.

In amount, the gifts totaled \$1,695,937.11. Of the total, approximately three-fifths, or \$1,028,201.22, was given for current use; the other \$667,735.89 was for addition to endowment funds.

Living individuals furnished approximately one-half of the total of gifts, as shown in the following:

Living individuals	\$ 772,026.51
Bequests	348,675.54
Foundations	346,634.95
Industry and business ...	122,744.42
Associations, etc.	64,191.92
Other sources	41,663.77
	<hr/>
	\$1,695,937.11

Twenty-two donors, including individuals, foundations, associations, and industry, made the largest gifts ranging from \$15,000 to \$156,000, and accounted for a total of \$926,206.41. The large total represented by the balance of gifts of lesser size indicates again the importance of wide support throughout the Stanford Family

in the form of annual gifts, which in amount are within the means of many individuals.

For current use, \$286,000 was given without restriction except as to School; and almost exactly the same amount, namely \$288,000, was added to the unrestricted endowment. The scholarship and fellowship program was augmented by \$183,000 for current use, and \$299,000 for endowment. Research was supported by current gifts of more than \$260,000. These figures give some approximation of the importance of gift money in developing the University.

The requirements for the development of the Stanford of the future are great. There are buildings to be rebuilt and others to be added; there are endowments for distinguished chairs in all departments, and general supplementation of salaries; there must be increased funds for assistance to students, to prevent selection on an economic basis in the face of the necessarily high tuition and living costs; the need for additional library books and for laboratory and other equipment makes an imposing total; and research calls for even greater support than heretofore.

Great as these requirements are, it is my firm belief that they are no larger than the aspirations of the Stanford Family for their University and their willingness and ability to see that the requirements are met.

The hundreds of volunteers who have worked this year and over many preceding years merit special thanks.

But for limitations of space, I could readily name a long list, deserving of such honorable mention. Surely such a list would have at the top Mr. Morgan A. Gunst, Chairman of the Special Gifts Committee, Mr. K. C. Ingram, Chairman of the Annual Appeal Committee, and Mr. L. H. Roseberry, President of Stanford Associates.

Staff Changes

Promotions (Effective September 1, 1947)

Promotions made during the year, to become effective for 1947-48, were as follows:

To Professorships:

KARL F. BODE, *Professor of Economics*

OLIVER E. BYRD, *Professor of Hygiene*

MRS. MAUD MERRILL JAMES, *Professor of Psychology and Education*

ALEXANDER LOUIS LONDON, *Professor of Mechanical Engineering*

HUBERT S. LORING, *Professor of Biochemistry*

HERBERT D. MERITT, *Professor of English Philology*

RICHARD A. OGG, JR., *Professor of Chemistry*

JOHN ROBERT REID, *Professor of Philosophy*

GEORGE F. SENSABAUGH, *Professor of English*

ORSON CUTLER SHEPARD, *Professor of Mining and Metallurgy*

ANTHONY E. SOKOL, *Professor of Germanic Languages*

DONOVAN H. YOUNG, *Professor of Civil Engineering*

To Associate Professorships:

HENRY P. GOODE, *Associate Professor of Mechanical Engineering*

ALFRED H. GROMMON, *Associate Professor of Education and English*

ALEXANDER E. A. NAUGHTON, *Associate Professor of Romanic Languages*

WILLIAM H. NORTHWAY, *Associate Professor of Medicine (Physiotherapy)*

LIONEL I. C. PEARSON, *Associate Professor of Classics*

REED CLARK ROLLINS, *Associate Professor of Biology (Botany)*

JEFFERY SMITH, *Associate Professor of Humanities and Philosophy*

RIXFORD KINNEY SNYDER, *Associate Professor of History*

PAUL WALLIN, *Associate Professor of Economics (Sociology)*

To Assistant Professorships:

ROBERT LEWIS BACON, *Assistant Professor of Anatomy*

WILLIAM A. BONNER, *Assistant Professor of Chemistry*

WAYNE S. VUCINICH, *Assistant Professor of History*

To Acting Assistant Professorship:

WALLACE DAYTON CLARK, *Acting Assistant Professor in Obstetrics and Gynecology*

Principal New Appointments

Among the appointments to positions in the University were the following:

SKIPWITH W. ATHEY, *Assistant Professor of Speech and Drama, and Electrical Engineering*

WILLIAM CARROLL BARK, *Associate Professor of History*
HAROLD J. BERMAN, *Acting Assistant Professor of Law*
HELMUT R. BOENINGER, *Assistant Professor of Germanic Languages*

*ALBERT H. BOWKER, *Assistant Professor of Mathematical Statistics*

HENRY GREENWOOD BUGBEE, *Assistant Professor of Philosophy*

*MARVIN CHODOROW, *Assistant Professor of Physics*

HAROLD DAVENPORT, *Acting Professor of Mathematics*

CLARENCE H. FAUST, *Director of University Libraries and Professor of English*

JAMES NORMAN GOODIER, *Professor of Mechanical Engineering*

COLIN OSBORNE HUTTON, *Acting Associate Professor of Mineral Sciences*

LAWRENCE A. KIMPTON, *Dean of Students and Professor of Philosophy*

EDWARD AUGUST KRUG, *Associate Professor of Education*

CARL G. LINDQUIST, *Assistant Professor of Chemistry*

CLAUD CLIFFORD LOMAX, JR., *Acting Assistant Professor of Civil Engineering*

*HENRY BONNER MCDANIEL, *Associate Professor of Education*

CHARLES E. MCLENNAN, *Professor of Obstetrics and Gynecology*

ARTHUR ABRAHAM MANDELBAUM, *Assistant Professor of Economics*

*ANATOLE MAZOUR, *Associate Professor of History*

*DOUGLASS WOOD MILLER, *Acting Professor of Journalism*

* Began in 1946-47.

*NICHOLAS MINORSKY, *Acting Professor of Mechanical Engineering Research*

*HAYES A. NEWBY, *Assistant Professor of Speech and Drama*

PAUL H. NORGREN, *Acting Professor of Economics*

GEORGE T. RENNER, *Acting Professor of Geography*

MILLARD BUXTON ROGERS, *Assistant Professor of Art*

*C. EASTON ROTHWELL, *Vice-Chairman, Hoover Institute and Library, and Research Professor, Hoover Institute*

LEONARD I. SCHIFF, *Associate Professor of Physics*

HAROLD C. SCHMIDT, *Associate Professor of Music*

RICHARD PINGREE SCOWCROFT, *Assistant Professor of English*

BERNARD J. SIEGEL, *Acting Assistant Professor of Anthropology*

PAUL B. SIMPSON, *Acting Assistant Professor of Economics*

DOUGLAS ARVID SKOOG, *Assistant Professor of Chemistry*

FERDINAND FAIRFAX STONE, *Acting Professor of Law*

VICTOR KING THOMPSON, *Assistant Professor of Art*

*VERTRESS LAWRENCE VANDERHOOF, *Associate Professor of Geology*

BRUCE GIDEON WOOLPERT, JR., *Acting Assistant Professor of Civil Engineering*

ARTHUR F. WRIGHT, *Acting Assistant Professor of History*

RICHARD SHIPMAN YOUNG, *Acting Assistant Professor of Law*

* Began in 1946-47.

Sabbatical Leaves

The following members of the faculty were on sabbatical leave of absence during the year:

- OSWALD NICKOLY ANDERSEN, *Professor of Hygiene*
ARTHUR CHARLES GIESE, *Professor of Biology (Winter, Spring, and Summer quarters)*
JOHN L. LIEVSAY, *Assistant Professor of English*
GEORGE S. LUCKETT, *Professor of Hygiene and University Health Officer (Winter Quarter)*
ROBERT R. NEWELL, *Professor of Medicine (One year beginning June 1, 1947)*
STANLEY L. SHARP, *Director of Men's Residence*
DONOVAN H. YOUNG, *Associate Professor of Civil Engineering*

Retirements

The following faculty members were retired, with emeritus status:

- NINA ALMOND, *Librarian and Consultant in Research, Emeritus*
HANS BARKAN, *Clinical Professor of Surgery (Ophthalmology), Emeritus*
THEODORE H. BOGGS, *Professor of Economics, Emeritus*
EDWIN ANGELL COTTRELL, *Professor of Political Science, Emeritus*
JAMES WILLIAM MCBAIN, *Professor of Chemistry, Emeritus*
EUGENE VALENTINE WARD, *Lecturer in Architectural Engineering, Emeritus*
HARRY ALPHONSO WYCKOFF, *Associate Professor of Medicine, Emeritus*

Resignations

Members of the staff who resigned were:

- OSWALD NICKOLY ANDERSEN, *Professor of Hygiene*
ARTHUR E. BESTOR, JR., *Associate Professor of History*
VICTOR S. CARSON, *Acting Associate Professor of Electrical Engineering*
ROBERT M. GRINNELL, *Assistant Professor of Humanities and Philosophy*
KLAUS E. KNORR, *Associate Economist and Associate Professor of Food Research*
EDWARD LEEF, *Associate Professor of Medicine*
JOHN L. LIEVSAY, *Assistant Professor of English*
LOCKHART B. ROGERS, *Assistant Professor of Chemistry*
MAXWELL H. SAVELLE, *Professor of History*
ALBERT CHARLES SCHAEFFER, *Professor of Mathematics*
STANLEY L. SHARP, *Director of Men's Residence*
MERRILL T. SPALDING, *Associate Professor of History and Research Associate, Hoover Institute*
ADRIAN MORRIS SRB, *Assistant Professor of Biology*

Faculty Deaths

The University suffered loss by death of the following members of the faculty:

- HAROLD PHILLIPS HILL, *Clinical Professor of Medicine, Emeritus, December 31, 1946*
THOMAS HENSHAW KELLY, *Associate Clinical Professor of Obstetrics and Gynecology, May 10, 1947*
MILES WHITNEY KRESGE, JR., *Instructor in Journalism, October 29, 1946*
HARVARD YOUNG MCNAUGHT, *Associate Clinical Professor of Surgery (Otorhinolaryngology), Emeritus, April 26, 1947*

WALTER SCHILLING, *Assistant Clinical Professor of Medicine, December 16, 1946*

JAMES V. USPENSKY, *Professor of Mathematics, January 27, 1947*

Trustees

Mr. Lloyd Dinkelspiel of San Francisco was elected on June 19, 1947, to the vacancy on the Board of Trustees which had existed after the death of Mr. Paul Shoup in the preceding year. Mr. Dinkelspiel is a Stanford alumnus of the class of 1920. Following his graduation from Stanford he secured the LL.B. degree from Harvard in 1922. He is active in the practice of law and is a public-spirited citizen in San Francisco.

The War Memorial

The plans adopted by the Board of Trustees for commemorating the valiant alumni of Stanford who died in World War II have been lauded by alumni and friends. The Board has promised full four-year tuition scholarships on admission to the University to the children of all Stanford war dead. In addition, a memorial niche will be built in the Memorial Hall, in which will be placed beautifully inscribed books bearing the names and records of all those who gave their lives. This memorial plan was most fittingly announced by the Chairman of the Board, Mr. W. P. Fuller, Jr., in a memorial statement at the commencement exercises in June.

Conclusion

This, then, is Stanford at the end of the academic year 1946-47. As I review the year and note the increases here and elsewhere in college enrollment, I am impressed not only with the new conditions these increases force upon us but still more with the evidence they give of the American faith in education.

In a democracy that faith is essential; ignorance and freedom can never go hand in hand. Americans have recognized this from the beginning of their history. Even in colonial days our people pressed continually for more schools and for a wider use of them. First, elementary education was made universal. Then, between 1870 and 1940, while our population trebled, high-school attendance increased thirty times. College and university enrollments doubled from 1900 to 1920; doubled again from 1920 to 1940; and increased about 75 percent from 1940 to 1947. Indications point to even larger numbers in the future.

But, as every one knows, facilities in these later years have not been appreciably increased. Since they have not, it is evident that the pressure placed on all parts of our institutions of learning—their plants, their faculties, their administrations—is now tremendous. It is so heavy a pressure that no relief is in sight so long as enrollments stand at their present levels. The provision of adequate plants alone would require at present prices not less than

twice the whole amount invested in plants before the war. And even if plants could be provided, there remains a more serious shortage. The difficulties under which our universities have carried on in the past several years have severely limited the number of men adequate to the task of effective teaching.

Great college teachers are rare. The great teacher must, first of all, be a responsible citizen of rugged integrity. He must be strongly motivated, resourceful, and persuasive. He must be exceedingly competent in his chosen field, but also broad enough in his training and perception to give the student a balanced understanding of the inter-relationship of his subject with other fields of knowledge. He must have a deep love for youth, an abiding desire to guide and help the young, sometimes impetuous student.

Here is our great and daunting lack. We may not safely assume that we can enroll twice the prewar number of students in our colleges and universities without expanding facilities and without doubling the present number of highly trained, qualified teachers and yet give to these students the kind of education they need if they are to be useful citizens. A misguided or diluted education will do little to strengthen our nation. There is grave danger that quantity may be accepted at the expense of quality.

The danger is the greater because of a third lack less immediately evident but not less important. This is the

lack, shared alike by college staffs and by the public, of a clear conception of educational aims, an understanding of its major purposes. Until this lack is supplied, our actions must be based in part on guesswork. No one can be sure just what or how much increase of faculty and facilities, when these come about, will accomplish.

In saying this, I am saying nothing new. The need of clearer understanding of what we want from education and how what we want is to be attained has long been recognized. What is new is only the present inescapable urgency of our world situation; it leaves us no time for mistakes or hesitations.

It is an urgency which presses upon Stanford as upon all universities. In common with them all, Stanford has a function to perform. With whatever effort and under whatever handicaps, Stanford must so instruct its students that they acquire not only professional skills but also an understanding of their heritage as American citizens and an ardor for the solving of those social problems which now perplex all thinking people.

Stanford cannot, however, and it must not try, to provide all types of post-high-school training. Such an effort would merely dissipate its resources. Stanford was founded as a residential university with a clearly defined purpose. Because its resources have been and are limited, its program must be restricted. To decide upon and to apply wisely this restricted program, the faculty, administration, and trustees, working together in the light of

present circumstances, must re-examine the purposes of the University. We must review our procedures for selecting students to make certain we are admitting those who can profit most from the programs we offer. We have no desire to be big; we are too big now. To make the most of our resources we need to limit enrollments still further. This may mean the elimination of some programs and the restriction of others. In the course of these changes, every curriculum, every training program, and every course offered requires careful scrutiny. Further, the entire program must be reviewed as a whole to see that it offers to students the kind of education now necessary in world affairs. The opportunities for specialization and professional work that are provided must be provided with full realization of the interrelationships between special fields of study.

Elsewhere, in a discussion of medical education, I said: "I have the strongest conviction that the first aim of medical education aside from the development of professional competence, should be to give the student a clear understanding that from first to last he will have a great concern with social problems. He will be called upon to subordinate his own private interests to the public interests again and again." Similarly every program of specialization requires a re-examination to make sure it serves this second end.

This re-examination must extend to all of our instructional procedures. At no point can we be complacent, for

we are well aware that, regardless of how excellent our methods may be, there are undoubtedly better methods still to be found. We propose to search for those methods.

In the final analysis, the quality of education depends upon the faculty—on the care with which they are selected, on general working conditions, on their zeal to inspire students, and on their co-operative efforts to improve the effectiveness of the University's program. Stanford is fortunate in the quality of its staff, in their loyalty to the institution, and in their sensitiveness to these critical times. Through their efforts in the past, the University has sent leaders to all corners of the world. With the present need for even greater leadership, Stanford can and will do no less now.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Donald D. Treadwell". The script is fluid and cursive, with a prominent initial "D".

President

APPENDIXES

APPENDIX I. ANNUAL FINANCIAL REPORT

APPENDIX II. SCHOOL AND DEPARTMENTAL REPORTS

APPENDIX III. COMMITTEE REPORTS

APPENDIX IV. ADMINISTRATIVE REPORTS

APPENDIX V. PUBLICATIONS OF THE FACULTY



APPENDIX II

SCHOOL AND DEPARTMENTAL REPORTS

*To the President**Leland Stanford Junior University*

I present herewith the financial report of Leland Stanford Junior University for the fiscal year ended August 31, 1947. The balance sheet and related statement of income, expenditures, appropriations, and surplus are accompanied by the report of Lybrand, Ross Bros. and Montgomery, certified public accountants, engaged to examine the University accounts.

BALANCE SHEET

The principal changes in the balance sheet since August 31, 1946, are the increase in amount receivable from the United States government, the unexpended amounts appropriated for maintenance and improvements, and the increase in unexpended gift funds.

The receivable from the United States government was occasioned largely by the fact that veterans' tuition, books, and supplies are carried on a charge basis to be collected from the government.

The amount of \$771,056.33 shown on the annexed balance sheet as "Unexpended amounts appropriated for maintenance and improvements," represents the balance unexpended at August 31, 1947, of authorizations for expenditure on special projects. These projects are but a small part of the repairs and improvements which were deferred during the war and prior years because of the shortage of labor, materials, and funds for financing. In order to operate the physical plant without serious impairment, it was necessary to begin the most urgent of the projects contemplated.

The balance of unexpended gift funds increased approximately \$1,309,000 since August 31, 1946. This increase was principally the result of the receipt of expendable gifts totaling \$1,011,946.72, and the transfer of \$1,022,423.61 in expendable building and other funds which had previously been carried in the Endowment Division under the caption "Funds Temporarily Functioning as Endowments." These increases were partially offset by the appropriation to income of \$739,447.80 to cover expenditures for the purposes intended by donors. Of the \$2,368,709.37 expendable gifts remaining at August 31, 1947, approximately \$1,800,000 was wholly committed for specific expenditure, such as building funds and grants for special research projects, some of which are designated for use over a period of years.

OPERATIONS

A summary of operations for the fiscal year is shown in the following condensed operating statement:

Income:	
Tuition and fees	\$4,102,888.31
Current year appropriations:	
Endowment income	1,362,535.73
Expendable gifts	739,447.80
Special funds	110,320.10
Government research projects	699,507.84
Other	138,085.39
	<u>\$7,152,785.17</u>
Expenditures and appropriations:	
Instruction, research, and libraries	4,188,260.48
Operation and maintenance of plant	526,321.30
Student aid, admission and other student services	662,096.13
Administration	207,329.34
Retirement allowances and group insurance	245,569.97
General expense and capital additions	333,483.98
Appropriations	<u>971,056.33</u>
	<u>7,134,117.53</u>
Excess of income over expenditures and appropriations	<u>\$ 18,667.64</u>

GIFTS

Gifts received by the University during the year totaled \$1,695,937.11 as follows:

Added to endowment funds	\$ 667,735.89
Added to student loan funds	16,254.50
Expendable gifts	<u>1,011,946.72</u>
	<u>\$1,695,937.11</u>

The importance of gifts to the operation of the Stanford program, is apparent, since a material portion of the income necessary for operation came from expendable gifts and from the income on gifts of previous years which were established as endowment funds.

ENDOWMENT INVESTMENTS

A summary of endowment investments at August 31, 1947, follows:

	Book Value	Percentage of Total
United States Government bonds	\$16,908,216	43.0%
Other bonds	3,180,815	8.1
Preferred stocks	2,711,281	6.9
Common stocks	<u>9,236,714</u>	<u>23.5</u>
Total securities	32,037,026	81.5
Cash, loans and other assets	1,515,225	3.9
Funds in trust with other trustees	1,166,484	3.0
Real estate	2,212,794	5.6
Income-producing institutional property	<u>2,350,663</u>	<u>6.0</u>
	39,282,192	<u>100.0%</u>
Less, investments applicable to General and Agency divisions	<u>2,371,623</u>	
Endowment assets	<u>\$36,910,569</u>	

The indicated market value of the \$32,037,026 securities was \$35,254,000 at August 31, 1947.

The average return on investments of merged endowment funds was 3.9%.

D. I. McFADDEN
Controller

FINANCIAL STATEMENT

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LYBRAND, ROSS BROS. & MONTGOMERY

CERTIFIED PUBLIC ACCOUNTANTS

*To the Board of Trustees
Leland Stanford Junior University
Stanford, California*

We have examined the balance sheet of Stanford University as of August 31, 1947, and the related condensed statement of income, expenditures, appropriations, and surplus for the fiscal year then ended. In connection therewith we have reviewed the system of internal control and the accounting procedures of the University and, without making a detailed audit of the transactions, have examined or tested accounting records and other supporting evidence, by methods and to the extent we deemed appropriate. We received confirmation from the depository with respect to all bonds and corporate stocks recorded as owned or held by the University at August 31, 1947, and we made substantial tests of the changes in investments and of the related income receivable during the fiscal year then ended.

In our opinion, the accompanying balance sheet and related condensed statement of income, expenditures, appropriations, and surplus present fairly the position of Stanford University at August 31, 1947, and the results of its operations for the fiscal year.

LYBRAND, ROSS BROS. & MONTGOMERY

**SAN FRANCISCO, CALIFORNIA
December 8, 1947**

STANFORD
BALANCE SHEET

ASSETS*General Division:*

Cash on hand and demand deposits		\$ 395,121.40
Receivables, less allowance for losses:		
United States Government	\$ 1,816,357.65	
Other accounts and notes	242,749.17	
Accrued interest	<u>116,912.41</u>	
		2,176,019.23
Securities invested with Endowment Division		2,215,922.20
Inventories		576,184.17
Deferred charges:		
Unexpired insurance premiums	78,675.82	
Other	<u>112,433.12</u>	
		191,108.94
Other assets, principally real estate		<u>55,197.47</u>
		<u>\$ 5,609,553.41</u>

Loan Division:

Tuition notes receivable	\$ 304,262.48
Student loans receivable	94,128.39
Cash available for student loans	<u>224,177.54</u>
	<u>\$ 622,568.41</u>

Endowment Division:

Demand deposits		\$ 633,574.92
Bonds (approximate market quotations \$20,858,000)	20,089,030.73	
Corporate stocks (approximate market quotations \$14,396,000)	<u>11,947,995.72</u>	
	32,037,026.45	
Less, investments applicable to General and Agency Divisions	<u>2,371,623.34</u>	
		29,665,403.11
Realty loans and contracts receivable		444,768.24
Other loans		54,429.72
Funds in trust with other trustees		1,166,483.58
Real estate and improvements		2,212,794.45
Income-producing institutional property		2,350,662.49
Building fund loan		372,702.42
Other endowment assets		<u>9,750.00</u>
		<u>\$36,910,568.93</u>

Plant Division:

Land, buildings, and equipment		\$20,333,210.07
Less, other division investments:		
General division investment in real estate	54,206.72	
Endowment division investment in income-producing institutional property	<u>2,350,662.49</u>	
		2,404,869.21
		<u>\$17,928,340.86</u>

Agency Division:

Specific investments:		
Bonds	120,560.89	
Corporate stocks	<u>133,913.52</u>	
		\$ 254,474.41
Securities invested with Endowment Division		<u>155,701.14</u>
		<u>\$ 410,175.55</u>
		<u>\$61,481,207.16</u>

UNIVERSITY
AUGUST 31, 1947

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LIABILITIES AND FUNDS

General Division:

Accounts and payrolls payable	\$ 601,599.41
Deposits and deferred credits	184,308.19
Renewal and replacement reserves	310,592.69
Other reserves	927,769.45
Unexpended amounts appropriated for maintenance and improvements	771,056.33
Unappropriated income, principally for restricted purposes:	
Expendable gifts	\$2,368,709.37
Endowment income	305,824.05
Special funds	60,045.87
	<hr/>
	2,734,579.29
Surplus. statement annexed	79,648.05

\$ 5,609,553.41

Loan Division:

Reserve for uncollected tuition notes	\$ 304,262.48
Funds contributed for student loans	318,305.93

\$ 622,568.41

Endowment Division:

Endowments:	
Unrestricted	\$24,841,461.96
Restricted, for scholarships and fellowships	2,301,162.77
Restricted, for schools and departments	4,999,782.38
Restricted, for student loan funds	54,758.00
Restricted, subject to annuities and living trust agreements	1,335,252.65
Restricted, in trust with other trustees	1,166,483.58
Restricted, other	73,913.62
	<hr/>
	34,772,814.96
Accumulated capital gains, net of losses, from sale and liquidation of unrestricted investment assets	2,137,753.97

\$36,910,568.93

Plant Division:

Gifts of plant	\$ 9,167,754.88
Plant acquired from income	8,387,883.56
Endowment funds borrowed, expended on educational plant	372,702.42

\$17,928,340.86

Agency Division:

Liability for funds held in custody for others	\$ 410,175.55
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\$ 410,175.55

\$61,481,207.16

CONDENSED STATEMENT OF INCOME, EXPENDITURES, APPROPRIATIONS, AND SURPLUS

For the year ended August 31, 1947

Income :		
Tuition and fees	\$4,102,888.31	
Current year appropriations :		
Endowment income	1,362,535.73	
Expendable gifts	739,447.80	
Special funds	110,320.10	
Government research projects	699,507.84	
Other	138,085.39	
		<u>\$7,152,785.17</u>
Expenditures :		
Instruction, research, and libraries	4,188,260.48	
Operation and maintenance of plant	526,321.30	
Student aid, admission, and other services	662,096.13	
Administration	207,329.34	
Retirement allowances and group insurance	245,569.97	
General expense	163,173.53	
Capital additions	170,310.45	
Appropriations :		
For addition to pension reserve	200,000.00	
For capital additions in progress	388,156.33	
For buildings, repairs, and improvements	382,900.00	
		<u>7,134,117.53</u>
Excess of income over expenditures and appropriations		18,667.64
Surplus, September 1, 1946		<u>60,980.41</u>
Surplus, August 31, 1947		<u>\$ 79,648.05</u>

NOTE: Depreciation and amortization provisions totaling \$114,634.97 on the endowment division's investment in income-producing institutional property were charged against the year's investment operations, and allocated in part to amortization of investment and in part to renewal and replacement reserves. With the exception of minor special provisions, no depreciation was provided for depreciable property included in the endowment division's investments in real estate and improvements. In conformity with general accounting practice of educational institutions, no depreciation was provided for property, principally educational plant, carried in the plant division.

DETAIL OF INCOME

For the year ended August 31, 1947

Tuition and fees :			
General tuition		\$3,901,939.98	
Tuition note collections		35,134.58	
Nurses' home rentals and service		88,326.30	
Application fees		39,231.48	
Aptitude test fees		17,091.50	
Special fees		<u>21,164.47</u>	
			\$4,102,888.31
Endowment income appropriated for current use :			
Bond interest		497,321.52	
Stock dividends		674,524.34	
Interest on loans and contracts		26,813.84	
Real estate income, net		58,094.88	
Income from trust funds held by others		28,013.55	
Net income of endowment investment in institutional property		<u>261,563.98</u>	
Endowment income earned		1,546,332.11	
Add :			
Balance of unappropriated income, September 1, 1946		<u>286,075.84</u>	
			\$1,832,407.95
Deduct :			
Income remaining unappropriated, August 31, 1947	\$305,824.05		
Income allocated to Agency Funds	5,155.87		
Income allocated to expendable gift funds	21,619.94		
Income paid to annuitants and life beneficiaries	88,937.88		
Income added to endowment principal	61,093.73		
Transfers from expendable gift funds	<u>-14,837.50</u>		
Transfers to other accounts	<u>2,078.25</u>		
		<u>469,872.22</u>	
			1,362,535.73
Gifts appropriated for current use :			
Total gifts received during year		1,695,937.11	
Deduct :			
Gifts credited to endowment funds	667,735.89		
Gifts credited to student loan funds	<u>16,254.50</u>		
		683,990.39	
Expendable gifts received		1,011,946.72	
Add :			
Balance of unappropriated gifts, September 1, 1946		1,059,671.17	
Transfers from endowment funds		1,022,423.61	
Transfers to unappropriated endowment income		<u>-14,837.50</u>	
Income allowed invested funds		21,619.94	
Other transfers and additions		<u>7,333.23</u>	
		3,108,157.17	
Deduct, gifts remaining unappropriated, August 31, 1947		<u>2,368,709.37</u>	
			739,447.80
Special funds appropriated for current use			110,320.10
Income from government research projects			699,507.84
Other income :			
Income, less direct expense, of auxiliary enterprises		58,393.00	
Rental of facilities		10,698.11	
Purchase discounts		12,877.94	
Food Research publication sales		2,283.79	
Sale of equipment		4,019.75	
Vocational guidance		20,160.00	
Miscellaneous		<u>30,652.80</u>	
			138,085.39
Total income			<u>\$7,152,785.17</u>

DETAIL OF EXPENDITURES AND APPROPRIATIONS

For the year ended August 31, 1947

Instruction, research, and libraries :		
School of Biology	\$ 149,750.08	
Graduate School of Business	151,793.84	
School of Education	113,010.96	
School of Engineering	224,835.98	
School of Humanities	466,416.98	
School of Law	139,970.62	
School of Medicine (including expense, less income, of Lane Hospital and Stanford Clinics amounting to \$182,434.60)	728,113.92	
School of Mineral Sciences	110,678.63	
School of Physical Sciences	297,235.90	
School of Social Sciences	388,359.11	
Expenditures not directly allocated to schools	55,850.55	
Organized research	1,034,258.17	
Libraries	327,985.74	
		<u>\$4,188,260.48</u>
Operation and maintenance of plant :		
Maintenance of grounds	91,320.20	
Repairs and alterations to buildings	86,118.17	
Janitor service	95,242.39	
Heating	74,375.05	
Electricity	36,640.62	
Sewage	5,213.15	
Police department	24,341.83	
Fire department	27,011.79	
Engineering and special surveying	6,699.47	
General Stores	18,389.69	
Telephone switchboard	10,695.81	
Fire, earthquake and liability insurance	20,844.99	
Taxes	6,437.22	
Furniture repairs and replacements	8,317.42	
Survey of plant facilities	14,673.50	
		<u>526,321.30</u>
Student aid, admission, and other student services :		
Dean of students' administration and counseling	38,432.93	
Registrar and records bureau	156,913.36	
Appointment and placement service	26,786.98	
Veterans' guidance, records and accounts	42,605.19	
Scholarships, fellowships and awards	197,765.44	
Student health	189,571.10	
Memorial Church	10,021.13	
		<u>662,096.13</u>
Administration		<u>207,329.34</u>
Retirement allowances and group insurance		<u>245,569.97</u>
General expense		<u>163,173.53</u>
Expenditures for capital additions :		
From gift funds	32,750.16	
For rearrangement of facilities	88,530.45	
Other capital expenditures	49,029.84	
		<u>170,310.45</u>
Appropriations :		
For addition to pension reserve		<u>200,000.00</u>
For capital additions in progress :		
Primary electric system	148,292.73	
Psychology alterations in Education building	26,000.00	
School of Engineering equipment	17,470.00	
Crothers hall	171,500.00	
Other	24,893.60	
		<u>388,156.33</u>
For buildings, repairs, and improvements :		
For water system	51,000.00	
For building program	150,000.00	
For repairs and improvements	181,900.00	
		<u>382,900.00</u>
Total expenditures and appropriations		<u><u>\$7,134,117.53</u></u>

SUMMARY OF ENDOWMENT INVESTMENT IN BONDS AND CORPORATE STOCKS

August 31, 1947

	Bonds	Corporate Stocks	Total
Merged funds	\$19,746,002.00	\$11,280,085.00	\$31,026,087.00
Specifically invested funds:			
Beach-Thompson fund	50,000.00		50,000.00
Francis William Bergstrom fund	701.00	3,367.50	4,068.50
Captain Quentin R. Birchard fund	1,000.00	1,845.08	2,845.08
George E. Crothers Law School fund		3,000.00	3,000.00
George E. Gamble fund		142,820.35	142,820.35
Louis S. Haas fund		37,400.00	37,400.00
Edward W. Hopkins fund	2,027.00	28,538.81	30,565.81
Margaret D. Huston fund	1,034.98	12,878.36	13,913.34
Ernest Gale Martin fund	1,000.00	13,369.44	14,369.44
John Pearce Mitchell fund		75,000.00	75,000.00
Estate of Solon Shedd fund	16,000.00	27,647.74	43,647.74
Valmira fund		36,562.50	36,562.50
Elizabeth and Rhona Williams fund	5,040.00		5,040.00
Thomas and Dora Williams fund	8,400.00		8,400.00
Hoover Library endowments	257,825.75	285,480.94	543,306.69
	<u>\$20,089,030.73</u>	<u>\$11,947,995.72</u>	<u>\$32,037,026.45</u>
Less investments applicable to general and agency divisions			2,371,623.34
Endowment investment			<u>\$29,665,403.11</u>

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SECURITY INVESTMENT OF MERGED FUNDS

August 31, 1947

BONDS				
Par value				Book value
<i>United States Government bonds:</i>				
\$ 1,500,000	Treasury	2	12/15/1954-52	\$ 1,500,000.00
3,000,000	Treasury	2¾	6/15/1962-59	3,000,000.00
2,000,000	Treasury	2½	6/15/1967-62	2,000,000.00
300,000	Treasury	2½	12/15/1968-63	300,000.00
400,000	Treasury	2½	6/15/1969-64	400,000.00
1,000,000	Treasury	2½	12/15/1969-64	1,000,000.00
450,000	Treasury	2½	3/15/1970-65	450,000.00
1,000,000	Treasury	2½	6/15/1972-67	1,000,000.00
6,800,000	Treasury	2½	12/15/1972-67	6,800,000.00
208,000	Savings "G"	2½	1953-58	208,000.00
				<u>16,658,000.00</u>
<i>Public utility bonds:</i>				
500,000	American Telephone & Telegraph Company	2¾	1961	500,000.00
200,000	Boston Edison Company	2¾	1970	200,000.00
300,000	Cleveland Electric Illuminating Company	3	1970	300,000.00
300,000	Commonwealth Edison Company	3	1977	300,000.00
300,000	Pacific Gas & Electric Company	3	1974	300,000.00
197,000	Philadelphia Company	4¼	1961	197,000.00
199,000	Puget Sound Power & Light Company	4¼	1972	199,000.00
300,000	Southern California Edison Company, Ltd.	3	1965	300,000.00
292,000	Southern California Gas Company	3¼	1970	292,000.00
				<u>2,588,000.00</u>
<i>Miscellaneous bonds:</i>				
200,000	Caterpillar Tractor Company	2	1956	200,000.00
300,000	Texas Corporation	3	1965	300,000.00
Miscellaneous—nominal value				2.00
				<u>500,002.00</u>
Total bonds				<u>\$19,746,002.00</u>

CORPORATE STOCKS		
Shares		Book value
	<i>Preferred stocks:</i>	
600	Beneficial Industrial Loan \$3.25	\$ 63,001.00
1500	Buffalo Niagara Electric Corporation 3.6%	154,443.00
1000	Bullock's, Inc. 4%	103,008.00
395	California Packing Corporation 5%	19,660.00
1000	Commonwealth & Southern \$6.00	117,231.00
1000	Consolidated Edison Company \$5.00	93,113.00
1500	Crown Zellerbach Corporation \$4.20	124,310.00
1000	Dow Chemical Company \$3.25	102,517.00
1000	Dresser Industries, Inc. 3¾%	111,368.00
500	Electric Power & Light Corporation \$6.00	65,754.00
1000	Food Machinery Corporation 3¼%	101,009.00
	Forward	<u>\$ 1,055,414.00</u>

SECURITY INVESTMENT OF MERGED FUNDS—Continued

Shares		CORPORATE STOCKS	Book value
		Forwarded	\$ 1,055,414.00
1000	General Mills, Inc. 3¾%		113,179.00
1000	Golden State Company, Ltd. 4%		103,667.00
1000	Goodyear Tire & Rubber Company \$5.00		94,204.00
1000	Illinois Power Company 5%		58,816.00
1000	McKesson & Robbins, Inc. Cum. \$4.00		106,102.00
1000	New York Power & Light Corporation 3.9%		104,009.00
1000	Northern States Power Company of Delaware 6%		100,756.00
500	Ohio Power Company 4½%		56,715.00
5000	Pacific Public Service \$1.30		136,641.00
2500	Rayonier, Inc. \$2.00		80,971.00
4000	Southern California Gas Company 6%		122,719.00
1000	Tidewater Associated Oil Company \$3.75		100,564.00
1000	Union Electric Company (Missouri) \$4.50		108,116.00
1000	United States Steel Corporation 7%		111,606.00
	Miscellaneous—nominal value		2.00
	Total preferred stocks		2,453,481.00
<i>Common stocks:</i>			
3000	Aetna Life Insurance Company		127,993.00
1000	Allied Chemical & Dye Corporation		202,004.00
2500	Allis Chalmers Manufacturing Company		96,834.00
2500	American Factors, Ltd.		65,000.00
3000	American Smelting & Refining Company		128,463.00
1000	American Tobacco Company "B"		66,370.00
4000	American Trust Company (S.F.)		161,086.00
3000	American Viscose Corporation		101,361.00
4000	Anglo California National Bank (S.F.)		163,116.00
6000	Best Foods, Inc.		113,980.00
1000	Bethlehem Steel Corporation		63,762.00
3000	Borg Warner Corporation		131,309.00
2000	Bullock's, Inc.		88,773.00
3000	Bunker Hill & Sullivan Mining Conc. Company		55,693.00
5000	California Packing Corporation		113,615.00
3000	Caterpillar Tractor Company		132,098.00
4000	Chrysler Corporation		126,558.00
3000	C.I.T. Financial Corporation		117,590.00
3000	Cincinnati Gas & Electric Company		80,291.00
3000	Commercial Credit Company		134,003.00
4000	Commonwealth Edison Company		105,590.00
6000	Crown Zellerbach Corporation		149,909.00
2500	Eastman Kodak Company		82,227.00
2600	Endicott Johnson, Corporation		86,671.00
2000	Fireman's Fund Ins. Company		95,501.00
3000	Firestone Tire & Rubber Company		125,976.00
3000	General American Transportation		161,164.00
4000	General Electric Company		110,768.00
4000	General Mills, Inc.		189,079.00
4000	General Motors Corporation		165,948.00
4000	Golden State Company, Ltd.		99,046.00
600	Guaranty Trust Company of New York		150,841.00
3500	Gulf Oil Corporation		166,081.00
8000	Gulf States Utilities		96,972.00
	Forward		\$ 4,055,672.00

SECURITY INVESTMENT OF MERGED FUNDS—Continued

CORPORATE STOCKS			Book value
Shares			
<i>Common stocks(continued):</i>			
	Forwarded		\$ 4,055,672.00
1000	Hartford Fire Insurance Company		78,144.00
3000	H. J. Heinz Company		123,022.00
3400	Honolulu Oil Corporation		140,073.00
3000	Inland Steel Company		84,194.00
1600	Insurance Company of North America		100,383.00
4000	Kennecott Copper Corporation		131,639.00
4000	McKesson & Robbins, Inc.		76,923.00
3000	Manufacturers Trust Company (N.Y.)		193,181.00
4000	Matson Navigation Company		146,000.00
4000	Montgomery Ward & Company		112,417.00
4000	National Cash Register Company		119,219.00
4000	National City Bank of New York		92,854.00
1500	National Steel Corporation		102,447.00
6000	Northern Indiana Public Service Company		106,502.00
4400	Pacific Gas & Electric Company		135,152.00
4200	Pacific Lighting Corporation		165,274.00
1800	Pacific Telephone & Telegraph Company		235,335.00
3000	Paraffine Companies, Inc.		110,748.00
5000	Pennsylvania Power & Light Company		106,564.00
5000	Philadelphia Electric Company		90,900.00
3000	Public Service Company of Colorado		107,805.00
5200	S & W Fine Foods, Inc.		135,399.00
6000	Sears, Roebuck & Company		102,458.00
300	Singer Manufacturing Company		91,501.00
5000	Southern California Edison Company, Ltd.		132,966.00
3000	Standard Brands, Inc.		98,338.00
6000	Standard Oil Company of California		181,497.00
5000	Standard Oil Company (Indiana)		134,191.00
3500	Standard Oil Company (New Jersey)		116,100.00
2500	Texas Company		123,339.00
1000	Time, Inc.		79,702.00
250	Travelers' Insurance Company		100,003.00
2000	Union Carbide & Carbon Corporation		131,132.00
1000	Union Pacific Railroad Company		77,478.00
3000	United States Tobacco Company		60,132.00
2000	U.S. Smelting, Refining & Mining Company		96,195.00
8700	Virginia Electric & Power Company		166,406.00
600	Wells Fargo Bank & Union Trust Company		171,230.00
6000	Westinghouse Electric & Mfg. Corporation		112,104.00
5000	Westinghouse Air Brake Company		81,971.00
	Miscellaneous—nominal value		20,014.00
Total common stocks			\$ 8,826,604.00
Total corporate stocks			<u>\$11,280,085.00</u>

SECURITY INVESTMENTS OF SPECIFICALLY INVESTED FUNDS

August 31, 1947

Par value or shares		Book value
<i>Beach-Thompson Memorial Scholarship fund:</i>		
\$ 50,000 pv	U.S. Treasury 2½ 1970-76	\$ 50,000.00
<i>Francis William Bergstrom fund:</i>		
\$ 1,000 pv	Associated Almond Growers of Paso Robles 1932	\$ 700.00
20 sh	Argus Corporation, common and preferred combined	12.50
55 sh	California Investment Fund, Inc., preferred	55.00
33 sh	California Savings & Loan Company	3,300.00
\$ 1,000 pv	Grand Trunk Railway Terminal & Cold Storage Company 6½% 1st mtg.	1.00
	Total	\$ 4,068.50
<i>Captain Quentin R. Birchard fund:</i>		
\$ 1,000 pv	U.S. Treasury 2½ 1972-67	\$ 1,000.00
50 sh	Standard Oil Company of California, common	1,845.08
	Total	\$ 2,845.08
<i>George E. Crothers Law School fund:</i>		
1,000 sh	Orpheum Building Company, common	\$ 3,000.00
<i>George E. Gamble fund:</i>		
Preferred stocks:		
800 sh	Pacific Gas & Electric Company 6%	\$ 16,940.00
800 sh	Pacific Public Service Company \$1.30	17,800.00
90 sh	Public Service Corporation N.J. \$5.00	8,198.00
Common stocks:		
200 sh	American Smelting & Refining Company	7,946.26
300 sh	California Ink Company Inc.	10,200.00
200 sh	General Motors Corporation	7,093.62
400 sh	Paraffine Companies, Inc.	18,500.00
400 sh	Proctor & Gamble Company	23,262.50
400 sh	Standard Oil Company of California	12,067.47
1,000 sh	Stewart-Warner Corporation	20,812.50
	Total	\$ 142,820.35
<i>Louis S. Haas fund:</i>		
170 sh	Wells Fargo Bank & Union Trust Company	\$ 37,400.00
<i>Edward W. Hopkins fund:</i>		
\$ 2,000 pv	U.S. Treasury 2½ 1972-67	\$ 2,027.00
Preferred stocks:		
115 sh	California Packing Corporation 5%	5,750.00
50 sh	Crown Zellerbach Corporation \$4.20	5,132.29
55 sh	New York Power & Light Corporation 3.90	5,720.25
100 sh	Pacific Gas & Electric Company 6%	2,575.00
Common stocks:		
100 sh	Cincinnati Gas & Electric Company	2,896.19
50 sh	Commercial Credit Company	2,124.33
50 sh	Honolulu Oil Corporation	2,170.89
55 sh	Pacific Gas & Electric Company	2,169.86
	Total	\$ 30,565.81

**SECURITY INVESTMENTS OF SPECIFICALLY
INVESTED FUNDS—Continued**

Par value or shares		Book value
<i>Margaret D. Huston fund:</i>		
\$ 1,000 pv	Southern California Gas Company 3¼ 1970	\$ 1,034.98
	Preferred stocks:	
21 sh	California Packing Corporation 5%	1,050.00
12 sh	New York Power & Light Corporation \$3.90	1,248.25
32 sh	Rayonier, Inc.	1,002.98
	Common stocks:	
30 sh	American Smelting & Refining Company	1,304.50
25 sh	American Trust Company (S.F.)	946.25
625 sh	American Woodlite Corporation	1.00
50 sh	Commonwealth Edison Company	1,160.52
20 sh	General Motors Corporation	966.63
25 sh	Independent Refining Company	1.25
40 sh	Pacific Lighting Corporation	1,972.17
40 sh	Southern California Edison Company, Ltd.	1,136.14
37 sh	Standard Oil Company of California	2,088.67
	Total	<u>\$ 13,913.34</u>
<i>Ernest Gale Martin fund:</i>		
\$ 1,000 pv	U.S. Treasury 2½ 1972-67	\$ 1,000.00
	Preferred stocks:	
25 sh	Crown Zellerbach Corporation \$4.20	2,534.00
25 sh	Northern States Power Company of Delaware 6%	2,650.00
100 sh	Southern California Gas Company 6%	3,947.31
	Common stocks:	
35 sh	Pacific Gas & Electric Company	1,088.13
150 sh	Philadelphia Electric Company	3,150.00
	Total	<u>\$ 14,369.44</u>
<i>John Pearce Mitchell fund:</i>		
158 sh	Pearce-Mauran Land Company, capital stock	<u>\$ 75,000.00</u>
<i>Estate of Solon Shedd fund:</i>		
\$16,000 pv	U.S. Savings "G" 2½ 1954	\$16,000.00
	Preferred stocks:	
50 sh	Dow Chemical Company \$3.25	5,125.80
55 sh	New York Power & Light Corporation 3.90%	5,720.25
100 sh	Pacific Gas & Electric Company 6%	2,600.00
	Common stocks:	
100 sh	American Smelting & Refining Company	3,785.91
100 sh	American Trust Company (S.F.)	2,650.00
100 sh	General Motors Corporation	3,430.00
100 sh	Honolulu Oil Corporation	4,335.78
	Total	<u>\$ 43,647.74</u>

**SECURITY INVESTMENTS OF SPECIFICALLY
INVESTED FUNDS—Continued**

Par value or shares		Book value
	<i>Valmira fund:</i>	
2,500 sh.	Rayonier, Inc. preferred \$2	\$ 36,562.50
	<i>Elizabeth and Rhona Williams fund:</i>	
\$ 6,000 pv	Palace Hotel Company of San Francisco 5 1945	\$ 5,040.00
	<i>Thomas and Dora Williams fund:</i>	
\$ 10,000 pv	Palace Hotel Company of San Francisco 5 1945	\$ 8,400.00
	<i>Hoover Library endowments:</i>	
	Bonds:	
\$ 15,000 pv	U.S. Treasury 2½ 1972-67	\$ 15,188.93
\$165,000 pv	U.S. Savings "G" 2½ 1953-59	165,000.00
\$ 15,000 pv	Commonwealth Edison Company 3 1977	15,580.92
\$ 20,000 pv	Pacific Gas & Electric Company 3 1974	20,722.72
\$ 20,000 pv	Southern California Gas Company 3¼ 1970	20,562.94
\$ 20,000 pv	Texas Corporation 3 1965	20,770.24
	Total bonds	<u>257,825.75</u>
	Preferred stocks:	
100 sh	Commercial Credit Company 3.60%	10,503.00
200 sh	Crown Zellerbach Corporation \$4.20	17,945.22
200 sh	Dow Chemical Company \$3.25	20,503.20
200 sh	Dresser Industries, Inc. 3.75%	22,071.50
200 sh	Food Machinery Company 3¼%	20,203.00
200 sh	New York Power & Light Corporation 3.90%	20,800.50
600 sh	Pacific Gas & Electric Company 6%	17,850.00
	Total preferred stocks	<u>129,876.42</u>
	Common stocks:	
200 sh	Aetna Life Insurance Company	6,800.85
200 sh	American Smelting & Refining Company	7,815.43
400 sh	Anglo California National Bank (San Francisco)	16,541.12
400 sh	Bullock's, Inc.	16,903.69
400 sh	Chrysler Corporation	11,569.28
100 sh	Fireman's Fund Insurance Company	8,400.00
400 sh	General Electric Company	10,241.66
300 sh	General Motors Corporation	11,080.54
100 sh	Honolulu Oil Corporation	4,323.25
300 sh	Montgomery Ward & Company	6,743.74
200 sh	Pacific Telephone & Telegraph Company	24,525.00
200 sh	Public Service Company of Colorado	7,094.12
200 sh	Southern California Edison Company	4,624.97
300 sh	Standard Oil Company of California	9,536.19
100 sh	Standard Oil Company of New Jersey	3,168.52
400 sh	Westinghouse Air Brake Company	6,236.16
	Total common stocks	<u>155,604.52</u>
	Total invested	<u>\$543,306.69</u>

ENDOWMENT FUNDS
CHANGES IN PRINCIPAL AND INCOME
For the year ended August 31, 1947

Principal				Income			
Balances Aug. 31, 1946	Gifts	Income	Other Changes	Transfers	Balances Aug. 31, 1947	Unrestricted Endowments:	
\$ 57,164.77					\$ 57,164.77	Anonymous	
1,283,385.85					1,283,385.85	Alexander, Wallace M., and Barker,	
50,000					50,000	Timothy, Leonard	
\$ 3,715.01					3,715.01	Carson, William W.	
110,212.60					110,212.60	Class of 1921 endowment fund	
1,000.00					1,000.00	Conrad, Jean, endowment	
200.00					200.00	Dalmo Victor, Inc.	
71,893.98					72,008.98	Douglass, Earl S.	
500.00					500.00	Dworzek, Bertha E., memorial	
6,966.78					6,966.78	Estes, Fred R.	
1,000,000.00					1,000,000.00	Farrand, George E.	
145,411.34					145,411.34	First million endowment	
1,500.00					1,500.00	Ford, Mary Virginia	
34,955.80					34,955.80	Gates, Frederick Herbert, memorial	
1,201.00					1,201.00	Goodan, Roger, fund	
37,779.00					37,779.00	Gould, estate of Carl P.	
1,500.00					1,500.00	Hammond, Leonard C. and Dorothy	
86,714.40					86,714.40	Hancock, Mrs. Walter	
200.00					200.00	Hunsaker, Mrs. Helen N.	
750.00					750.00	Keech and Helen N.	
100.00					100.00	Kyle, Joseph Horton	
100,727.03					100,727.03	Lowenson, Leland H.	
6,543.01					6,543.01	Mahs, Fred R., Jr.	
34,750.00					34,750.00	Nafziger, Mr. and Mrs. R. E.	
5,250.00					5,250.00	Newman, Lawrence	
1,000.00					1,000.00	Ohlandt, William	
19,000.00					19,000.00	Pillsbury, E. S.	
21,297.736.85					21,297.736.85	Rosenberg, Gussie and Morris	
28,593.57					28,593.57	Rosenberg, Walter	
44,291.48					44,291.48	Sanson, Walter	
364,590.40					364,590.40	Schulte, Dr. Walter G.	
						Shuffleton, Edith B.	
						Stanford new endowment	
						Stanford donors	
						Sundry donors	
						Sutherland, Tucker and Bentley trust	
						Swiatek, Theodore E.	
						Third million endowment	
						Valmira fund	
						Wilson endowment	
\$ 22,545.05					\$ 22,545.05	Total unrestricted endowments	
\$24,800,935.66					\$24,800,935.66		

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ENDOWMENT FUNDS—Continued

Principal				Income			
Balances Aug. 31, 1946	Gifts	Income	Other Changes	Transfers	Balances Aug. 31, 1947	Forwarded	Balances Aug. 31, 1946
\$ 809,266.74	\$100,268.98	\$ 2,326.42	\$ 1,449.37	\$ 570.50	\$ 913,882.01		\$ 23,875.81
Scholarships and Fellowships:							
General:							
7,197.94	.....	.....	.....	.....	7,197.94	Mother, Clelia D.	1,288.74
3,000.00	.....	.....	.....	.....	5,000.00	Mayer, Richard Albert	250.01
3,500.00	5,650.00	.....	.....	.....	8,900.00	Mumie, Dick memorial	236.40
229,935.41	.....	.....	.....	.....	229,935.41	Newell, Henry	4,336.49
1,403.13	.....	.....	.....	.....	1,403.13	Nicholson, Dr. Francis J.	59.73
1,450.96	450.00	.....	.....	.....	4,100.96	Phillips, John Pressley, Jr.	58.23
11,612.48	.....	.....	.....	.....	11,612.48	Prestley, George J.	44.93
100,000.00	.....	.....	.....	.....	100,000.00	Rosenberg, Abraham	1,720.38
25,000.00	.....	.....	.....	.....	25,000.00	Rosenberg, Richard F., memorial	3,912.73
6,185.20	.....	126.22	.....	.....	6,311.42	Sandwick, Alice J.	1,000.00
3,000.00	.....	.....	.....	.....	3,000.00	San Francisco Polytechnic High School Student Body	632.40
5,000.00	.....	.....	.....	.....	5,000.00	San Francisco regional	1,435.54
6,773.34	.....	.....	.....	.....	6,773.34	Seale, Henry W. and Jessie D.	33.51
6,130.06	5.00	278.05	.....	.....	6,413.11	Senior Class	251.06
6,000.00	.....	.....	.....	.....	6,000.00	Sloss, Leon	53.83
7,500.00	.....	.....	.....	.....	7,500.00	Sloss, Louis and Sarah	166.30
25.00	.....	.....	.....	.....	25.00	Smith, Orilla Buehler	1.00
49,695.58	.....	.....	.....	49,695.58	49,695.58	Stanford futures	.....
6,000.00	.....	.....	.....	.....	6,000.00	Stanford, Leland, Jr., memorial	20.60
1,496.00	.....	.....	.....	.....	1,496.00	Stewart, Arthur B.	38.75
5,900.00	5.00	.....	.....	.....	5,905.00	Storey, Fannie Hamilton	30.77
168,068.54	.....	.....	.....	.....	168,068.54	Student aid endowment	19.00
1,500.00	.....	.....	.....	.....	1,500.00	Switzer, J. M.	2,370.05
1,500.00	.....	.....	.....	.....	1,500.00	Sykes, Catherine Whalley	7.00
1,500.00	.....	.....	.....	.....	1,500.00	Taos Indian fund	30.00
3,210.37	.....	.....	.....	.....	3,210.37	Taylor, Fannie Wilkinson	18.50
1,738.66	120.50	.....	.....	.....	1,738.66	Tuition endowment	47.27
5,000.00	526.72	.....	.....	.....	5,000.00	Vanderburgh, Stanley Wilson	479.15
1,211.94	.....	.....	.....	.....	1,211.94	Vanderburgh, Stanley Wilson	62.79
134,254.58	.....	.....	.....	.....	134,254.58	Voorhees, Helen Bennett	2,977.59
12,500.00	.....	.....	.....	.....	12,500.00	Wilbur, Ray Lyman	622.65
30,851.87	25.00	.....	.....	.....	30,851.87	Yost, Mary	515.60
8,784.40	671.76	.....	.....	.....	9,456.16	Yost, Mary	93.94
School of Biological Sciences:							
.....	.....	.....	.....	.....	.....	Eabergs, Alfred, The (see General)	.....
5,000.00	.....	.....	.....	.....	5,000.00	Muehlaupt, Oscar W. T. and Mary	.....
7,493.38	.....	.....	.....	.....	7,493.38	Strobridge memorial	229.00
.....	.....	.....	.....	.....	.....	Peterson, Margaret Rogers	226.40
Graduate School of Business:							
4,000.00	.....	.....	.....	.....	4,000.00	Coolley, Frederick Bronson	50.00
12,313.50	1,000.00	.....	.....	.....	12,313.50	Dowrie, George W.	180.60
75.00	1,743.50	.....	.....	.....	75.00	General scholarships	2.93
20,000.00	.....	.....	.....	.....	20,000.00	Hicks, Clarence J.	3.00
Forward,.....\$ 47,175.45 \$ 69,950.87 \$ 54,696.90 \$ 2,129.69 \$ 64,559.11							
\$ 1,667,000.84	\$109,819.24	\$ 3,377.91	\$ 1,449.37	\$ 50,266.08	\$ 1,831,913.44		

ANNUAL FINANCIAL REPORT

ENDOWMENT FUNDS—Continued

Principal				Income			
Balance Aug. 31, 1946	Gifts	Income	Other Changes	Transfers	Balance Aug. 31, 1947	Income	Other Changes
\$ 1,667,000.84	\$109,819.24	\$ 3,377.91	\$ 1,449.37	\$ 50,266.08	\$ 1,831,913.44		
.....
.....
25,000.00	.....	.....	.....	.....	25,000.00	.....	.....
.....
.....
5,384.59	1,000.00	.....	.....	.....	6,384.59	.....	.....
10,000.00	.....	.....	.....	.....	10,000.00	.....	.....
.....
13,250.00	270.00	406.30	.....	.....	13,250.00	.....	.....
12,081.51	.....	.....	.....	.....	12,757.81	.....	.....
.....
.....
2,385.75	.....	298.97	.....	.....	2,684.72	.....	.....
.....
.....
1,594.35	.....	207.25	.....	.....	1,801.60	.....	.....
500.00	.....	.....	.....	.....	500.00	.....	.....
20,000.00	.....	.....	.....	.....	20,000.00	.....	.....
1,010.00	.....	.....	.....	.....	1,010.00	.....	.....
4,150.00	388.87	.....	.....	.....	4,538.87	.....	.....
3,000.00	5,000.00	.....	.....	.....	3,000.00	.....	.....
10,000.00	11,655.58	.....	.....	.....	10,000.00	.....	.....
10,000.00	.....	.....	.....	.....	10,000.00	.....	.....
3,000.00	5,000.00	.....	.....	.....	3,000.00	.....	.....
3,365.00	50.00	.....	.....	.....	3,365.00	.....	.....
6,881.29	.....	.....	.....	.....	6,931.29	.....	.....
\$ 1,808,603.33	\$133,183.69	\$ 4,290.43	\$ 1,449.37	\$ 50,266.08	\$ 1,997,792.90		
				Forward			
					\$ 54,414.13	\$ 76,253.62	\$ 58,885.90
							\$ 1,382.17
							\$ 73,164.02

SCHOLARSHIPS AND FELLOWSHIPS:

School of Education:

Forwarded

Fitch, Mary Ann Erwin (see

General)

School of Engineering:

Baldwin, George Porter, Foundation

Bernier, August (see General)

Dunn, Orrin W. (see General)

Esberg, Alfred, The (see General)

Morgan, Nathaniel Richard

Wilbur-Ellis Company

Civil Engineering:

Garland, William, memorial

Wing, Charles E.

School of Engineering:

Electrical Engineering:

Morgan, Nathaniel Richard (see

School of Engineering)

Mechanical Engineering:

Bernier, August (see General)

Eckhart, William Roberts

Morgan, Nathaniel Richard (see

School of Engineering)

School of Humanities:

Classics Department:

Francis, fund

English Department:

Hardy, Irene, prize

Loomis, George

Urnay, Clarence, award

Law School:

Crothers, George E.

Dunway, John Cushing

Foster, Hugh

Haffner, John M.

Hale, James D., memorial

Harris, Beulah, estate of

McDonald, Frederick Dewey

Sharp, Mrs. A.

Stanford law veterans memorial

Whittier, Clarke Bulter

Balance
Aug. 31, 1946

Income

Appropriated

Other
ChangesBalance
Aug. 31, 1947

Forwarded

Fitch, Mary Ann Erwin (see

General)

School of Engineering:

Baldwin, George Porter, Foundation

Bernier, August (see General)

Dunn, Orrin W. (see General)

Esberg, Alfred, The (see General)

Morgan, Nathaniel Richard

Wilbur-Ellis Company

Civil Engineering:

Garland, William, memorial

Wing, Charles E.

School of Engineering:

Electrical Engineering:

Morgan, Nathaniel Richard (see

School of Engineering)

Mechanical Engineering:

Bernier, August (see General)

Eckhart, William Roberts

Morgan, Nathaniel Richard (see

School of Engineering)

School of Humanities:

Classics Department:

Francis, fund

English Department:

Hardy, Irene, prize

Loomis, George

Urnay, Clarence, award

Law School:

Crothers, George E.

Dunway, John Cushing

Foster, Hugh

Haffner, John M.

Hale, James D., memorial

Harris, Beulah, estate of

McDonald, Frederick Dewey

Sharp, Mrs. A.

Stanford law veterans memorial

Whittier, Clarke Bulter

ANNUAL FINANCIAL REPORT

ENDOWMENT FUNDS—Continued

Principal					Income				
Balances Aug. 31, 1946	Gifts	Income	Other Changes	Transfers	Balances Aug. 31, 1947	Income	Appropriated	Other Changes	Balances Aug. 31, 1947
\$ 1,808,603.33	\$133,183.69	\$ 4,290.43	\$ 1,449.37	\$ 50,266.08	\$ 1,997,792.90				
.....	1,500.00	.....	.....	.....	.....	19.50	.....	1,000.00	1,019.50
.....	10,000.00	32.50	.....	.....	.....	32.50	.....	-32.50	2,556.67
10,000.00	390.00	.....	.....	39.00
.....	1,500.00	.....	.....	.....	.....	.....	.....	.....	.....
.....	25,000.00	.....	.....	.....	.....	.....	.....	.....	.....
.....
.....	7,000.00	.....	.....	.....	.....	159.25	.....	.....	159.25
.....	20.50	.....	.....	20.50
5,000.00	195.00	.....	.....	406.54
6,300.00	245.70	.....	.....	13.33
.....	12,750.00	.....	.....	.....	.....	760.84	.....	.....	313.01
5,021.44	117.17	.....	.....	.....
.....
5,471.22	205.37	.....	-205.37	.....
1,265.85	205.37	.....	.....	.....	.....	.....	.....	.....
5,000.00	50.00	.....	.....	.....	.....	42.76	.....	.....	169.46
12,747.00	600.00	.....	.....	630.99
6,010.00	997.13	.....	.....	975.08
2,714.25	100.00	.....	.....	14.43
.....
1,500.00	19.50	1,000.00	1,000.00	19.50
.....
20,000.00	780.00	534.00	.....	2,179.33
.....
8,625.00	1,933.33	.....	.....	.....
7,030.00	1,168.97	500.00	.....	1,005.35
.....	160.00	348.40	.....	430.48	.....	1,032.64	500.00	-348.40	500.00
.....
.....
6,704.50	1,005.00	.....	.....	.....	.....	264.76	230.00	.....	120.68
.....
10,766.00	647.58	419.87	.....	1,067.45
11,000.00	603.33	429.00	.....	603.33
.....
10,000.00	32.50	500.00	.....	32.50
2,800.00	118.49	500.00	381.51	.....
.....	3.03	.....	1,421.52	.....	247.28	150.00	.....	.....
6,340.63	547.28	450.00	480.00	-547.28	967.34
16,000.00	823.34
8,500.00	1,083.01	331.50	1,414.51
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ANNUAL FINANCIAL REPORT

ENDOWMENT FUNDS—Continued

Principal				Income			
Balance Aug. 31, 1946	Gifts	Income	Other Changes	Transfers	Balance Aug. 31, 1947	Income	Other Changes
\$ 1,957,716.00	\$216,568.31	\$ 5,420.95	\$ 1,449.37	\$ 52,118.08	\$ 2,233,272.71		
2,011.00	.....	.....	.....	.....	2,011.00	78.43	.....
10,000.00	.....	.....	.....	.....	10,000.00	390.00	.....
5,000.00	.....	.....	.....	.....	5,000.00	16.25	.....
25,000.00	10.00	.....	.....	.....	25,010.00	975.20	.....
15,615.00	7,650.00	1,699.35	.....	.....	24,964.35	859.46	.....
611.00	200.00	93.71	.....	.....	904.71	27.73	.....
\$ 2,010,953.00	\$229,428.31	\$ 7,214.01	\$ 1,449.37	\$ 52,118.08	\$ 2,301,162.77	\$ 85,158.47	\$ 1,237.07
\$ 5,716.29	25.00	.....	.....	.....	5,741.29	223.50	.....
451.20	.....	\$ 17.60	.....	.....	468.80	17.60	.....
4,238.79	.....	.....	.....	.....	4,238.79	165.31	.....
337.98	5.00	.....	.....	.....	342.98	13.33	.....
10,000.00	.....	.....	.....	.....	10,000.00	390.00	.....
.....	1,000.00	.....	.....	.....	1,000.00	29.25	.....
1,302.77	.....	.....	.....	.....	1,302.77	50.81	.....
100,000.00	.....	.....	.....	.....	100,000.00	3,900.00	.....
24,754.24	.....	.....	.....	.....	24,754.24	965.42	.....
15,250.00	.....	.....	.....	.....	15,250.00	594.75	.....
1,686.33	.....	.....	.....	.....	1,686.33	65.77	.....
2,500.00	.....	.....	.....	.....	2,500.00	97.50	.....
2,095.95	.....	.....	.....	.....	2,095.95	81.74	.....
\$ 168,333.55	\$ 1,030.00	\$ 17.60	.....	.....	\$ 169,381.15	\$ 6,594.98	\$ 2,261.54
						\$ 4,238.88	\$ 17.45
							\$ 8,549.87

SCHOLARSHIPS AND FELLOWSHIPS:

Forwarded.....

School of Social Sciences:

Economics:

Kelly, James Richard, memorial ...

History:

Cory, Mabel Hyde

Briote, Mary Foster

Weter, James Birdall

Journalism:

Jacoby, Melville J.

Political Science:

Peters, Lindsay, Jr.

Total scholarships and fellowships.....

SCHOOLS AND DEPARTMENTS:

General:

Jordan, David Starr, memorial

Religious School of

Rogers, F. I. and Josephine, for

School of Religion

Thorne, Allene, for bookshelf in

Dean of Women's Office

West, R. F., for lectures on immor-

tality and kindred subjects

Wilcox, Edwin A. and Mary S.,

research fund

School of Biological Sciences:

Biology:

General library

Herzstein, Dr. Morris

Hopkins Marine Station:

Library fund

Pillsbury, E. S., book fund

Smith, James Ferrin

Natural History Museum:

Benson, Gilbert T., for maintenance

of Dudley Herbarium

Campbell, Douglas Houghton

Forward.....

ANNUAL FINANCIAL REPORT

ENDOWMENT FUNDS—Continued

Principal				Income			
Balances Aug. 31, 1946	Gifts	Other Changes	Transfers	Balances Aug. 31, 1946	Income	Appropriated	Other Changes
\$ 168,333.55	\$ 1,030.00	\$ 17.60	.....	\$ 4,233.88	\$ 6,594.98	\$ 2,261.54	\$ -17.45
\$ 169,381.15	.....	.....	.....	Forwarded.....	.....	.....	.....
<i>Graduate School of Business:</i>							
.....	.....	.....	.....	Baker, Albert H., library fund	13.38	19.50	.....
500.00	.....	.....	.....	Carr book fund	9.10	8.78	19.82
225.00	.....	.....	.....	Coleman, S. Waldo, library fund	103.39	172.25	17.86
3,500.00	1,000.00	.....	.....	Fayre, Eugene, memorial shelf	75.12	40.95	173.55
1,050.00	.....	.....	.....	Ghirardelli, Domingo, memorial	.....	.....	97.49
.....	.....	.....	.....	book fund	101.29	351.00	.....
9,000.00	.....	.....	.....	Keast, George R., library fund	281.41	455.00	177.33
12,500.00	.....	.....	.....	Lowe, William H., library fund	46.67	78.00	297.70
2,000.00	.....	.....	.....	Publications	400.00	390.00	70.36
10,000.00	.....	.....	.....	Witter, Dean, library fund	139.90	195.00	790.00
5,000.00	.....	.....	.....	.....	.....	80.94	253.96
<i>School of Education:</i>							
3,718.50	.....	.....	.....	Buckel, C. Amette, Foundation	— 01	145.02	.....
50,000.00	.....	.....	.....	Cubberley book purchase fund	454.05	1,824.41	579.64
10,090.00	1.00	.....	.....	Cubberley lectureship	685.03	393.54	578.57
26,983.97	.....	1,111.42	.....	Cubberley memorial library	.....	1,111.42	-1,111.42
<i>School of Engineering:</i>							
2,402.57	10.00	.....	.....	Canfield memorial fund	127.66	93.86	177.71
2,600.00	2,600.00	.....	.....	Elliot, Walter, The, memorial	.....	16.90	16.90
1,399.50	125.00	.....	.....	Morris library fund	72.31	57.51	121.56
.....	.....	.....	.....	Electrical Engineering:	.....	.....	.....
.....	.....	.....	.....	Frankenfield, Budd	1,331.08	1,560.00	2,891.08
40,000.00	.....	.....	.....	Mechanical Engineering:	.....	.....	.....
.....	.....	.....	.....	Langille book fund	153.60	26.29	155.90
674.00	.....	.....	.....	School of Humanities:	.....	.....	.....
.....	.....	.....	.....	Asiatic and Slavic:	.....	.....	.....
.....	.....	.....	.....	Chinese library	.....	3.01	-3.01
80.25	.....	.....	.....	Music:	.....	.....	.....
67,670.00	.....	.....	.....	Brekaw, Ann Clare, memorial	3,318.75	2,613.13	5,931.88
.....	.....	.....	.....	Law School:	.....	.....	.....
1,526.47	.....	.....	.....	Book fund, 1911 J. D. Class	172.44	49.78	222.22
2,364.01	.....	.....	.....	Huston, Charles Andrews, memo-	315.95	92.20	357.21
1,204.40	.....	.....	.....	rial book fund	32.12	46.97	79.09
.....	.....	.....	.....	Library fund	.....	.....	.....
5,000.00	.....	.....	5,000.00	Sloss, Judge M. C., collection	.....	97.50	.....
500.00	.....	.....	500.00	Smith, Lloyd Melvin, for books	.....	.....	54.50
.....	.....	.....	.....	Forward.....	12,067.12	16,562.59	-1,077.38
\$ 415,219.21	\$ 9,766.00	\$ 1,132.03	\$ 4,633.66	.....	.....	.....	\$ 21,614.22
\$ 415,219.21	\$ 9,766.00	\$ 1,132.03	\$ 4,633.66	.....	.....	.....	\$ 21,614.22

ANNUAL FINANCIAL REPORT

ENDOWMENT FUNDS—Continued

Principal				Income			
Balance Aug. 31, 1946	Gifts	Income	Other Changes	Transfers	Balance Aug. 31, 1947	Income	Other Changes
\$ 415,219.21	\$ 9,766.00	\$ 1,132.03	\$ 4,633.66	\$ 5,500.00	\$ 436,250.90	\$ 12,067.12	\$ 5,938.11
39,817.63	36,365.00				36,365.00	236.37	11,426.17
10,244.59					39,817.63	1,552.89	3,720.00
10,000.00					10,244.59	883.41	44.87
8,500.00					10,000.00	1,632.97	371.46
1,459.21					8,500.00	475.00	1,651.51
4,168.00	275.00				1,459.21	331.50	806.50
2,500.00					4,168.00	169.78	169.78
4,005.00					2,500.00	330.81	97.50
1,000.00					4,005.00	156.20	487.01
					1,000.00	39.00	121.60
50,000.00					50,000.00	1,950.00	519.96
3,927.09					3,927.09	153.16	478.61
2,500.00					2,500.00	97.50	97.50
5,000.00					5,000.00	195.00	195.00
21,041.06		820.60	1,564.96		21,041.06	820.60	820.60
825,838.67					825,838.67	31,457.50	45,660.45
2,196.60					2,196.60	85.67	314.44
2,650.00					2,650.00	103.35	1,335.69
4,473.57					4,473.57	370.60	545.07
6,000.00					6,000.00	495.60	729.60
4,990.51					4,990.51	116.45	311.08
500.00					500.00	19.50	19.50
1,368.00					1,368.00	53.35	139.99
10,000.00					10,000.00	390.00	1,216.00
18,000.00					18,000.00	702.00	1,527.85
1,000.00					1,000.00	39.00	578.73
110,423.81					110,423.81	5,614.89	3,659.89
20,000.00					20,000.00	780.00	4,989.99
							1,065.67
764.07					764.07	29.80	29.80
\$ 1,587,387.02	\$ 46,406.00	\$ 1,952.63	\$ 6,198.62	\$ 32,824.88	\$ 1,674,969.15	\$ 62,148.06	\$ 83,368.99
							\$ 10,593.86
							\$ 103,019.15

SCHOOLS AND DEPARTMENTS:

Forwarded.....

Medical School:

Barber, Mary D.....
 Barkan, Adolph, Foundation.....
 Barkan, Dr. Adolph, for history of
 medicine and natural sciences.....
 Barkan, Dr. Adolph, for medical
 library books.....
 Barkan, Fritz, Jr., memorial.....
 Beasley memorial fund.....
 Boardman, Walter W., memorial.....
 Borel, A., for medical library.....
 Brodrick memorial free-bed fund.....
 Bryce, Peter C., free-bed endow-
 ment in obstetrics.....
 Carson, William W., for care of
 clinical patients.....
 Claiborne, Marian F., for free beds.....
 Coleman, Edward, for medical
 library.....
 Dodge, Henry Lee, memorial for
 library books.....
 Fisher, Mary K., and Harold K.,
 free-bed fund for children.....
 Farnsworth, David L., fund.....
 Gibbons, Henry, Jr., library of
 obstetrics and gynecology.....
 Gilkbar, Emilie, memorial.....
 Grateful patients free-bed fund.....
 Hewes, David, free-bed fund.....
 Hines, Stetson G., II, for free beds.....
 Holton, Luther Janna, for medical
 library books.....
 Hooper, Ida G., memorial.....
 Hopkins, Moses, memorial for
 hospital beds.....
 Horner, Gladys E., Cancer Re-
 search Foundation.....
 Lane, Levi Cooper, fund.....
 Lane, Levi Cooper, library of
 medicine and surgery.....
 Lane medical library and
 medical reserve.....
 Larsen, Dr. Julia P., memorial
 section of Lane library.....

Forward.....

\$113,646.22 \$ 62,148.06 \$ 83,368.99 \$ 10,593.86 \$103,019.15

ENDOWMENT FUNDS—Continued

[illegible]

ANNUAL FINANCIAL REPORT

ENDOWMENT FUNDS—Continued

Principal					Income					
Balances Aug. 31, 1946	Gifts	Income	Other Changes	Transfers	Balances Aug. 31, 1947	Balances Aug. 31, 1946	Income	Appropriated	Other Changes	Balances Aug. 31, 1947
\$ 5,031,022.79	\$115,505.55	\$ 1,983.28	\$ 6,198.62	14,543.63	\$ 3,169,253.87	\$150,124.31	\$21,555.73	\$136,013.22	\$ 8,063.21	\$143,730.03
SCHOOLS AND DEPARTMENTS:										
School of Social Sciences:										
History:										
6,178.54	.....	.....	.....	.....	6,178.54	980.18	240.96	230.00	.....	991.14
18,421.46	39,029.90	2,178.30	.....	45,139.98	104,769.64	.....	2,178.30	.....	-2,178.30	.....
30,021.00	.....	.....	.....	.....	30,021.00	-16.59	1,170.82	.....	-1,125.60	28.63
881.60	.....	.....	.....	.....	881.60	1.99	34.38	36.37	.....	.....
Political Science:										
600.00	.....	.....	.....	.....	600.00	22.31	23.40	.....	171.26	216.97
50,000.00	.....	.....	.....	.....	50,000.00	1,000.00	1,950.00	152.86	.....	2,797.14
525,092.77	.....	.....	.....	.....	525,092.77	.....	20,478.62	20,478.62	.....	.....
150.86	199.17	13.18	.....	.....	363.21	4.58	8.60	.....	-13.18	.....
Literature:										
University Library:										
6,163.97	.....	.....	.....	.....	6,163.97	287.25	240.39	527.64	.....	310.02
3,791.83	.....	.....	.....	.....	3,791.83	267.77	177.88	46.23	.....	263.16
1,986.20	5.00	.....	.....	.....	1,991.20	185.62	77.84	.....	.....	243.16
950.43	.....	.....	.....	.....	950.43	83.01	37.07	.....	.....	120.08
25,000.00	.....	.....	.....	.....	25,000.00	-81.91	975.00	893.09	.....	7.95
50.00	.....	.....	.....	.....	50.00	6.00	1.95	.....	.....	.....
500,000.00	.....	.....	.....	.....	500,000.00	* 3,104.82	19,500.00	22,604.82	.....	73.76
1,000.00	.....	.....	.....	.....	1,000.00	34.76	39.00	.....	.....	.....
Hoover Institute and Library:										
287,365.96	.....	.....	5,947.70	.....	293,313.66	-343.49	10,809.08	10,465.59	.....	.....
224,901.31	.....	.....	7,269.13	.....	232,110.44	-215.59	8,690.36	8,474.77	.....	.....
2,040.85	.....	.....	.....	.....	2,040.85	280.98	79.59	46.40	.....	314.17
16,500.00	3,547.12	.....	.....	.....	20,047.12	1,996.59	781.84	.....	.....	2,778.43
2,190.05	.....	.....	-2.40	.....	2,187.65	154.35	85.32	.....	40.42	280.09
20,668.53	.....	806.07	.....	.....	21,474.60	.....	806.07	.....	-806.07	.....
2,500.00	.....	.....	.....	.....	2,500.00	150.00	97.50	6.16	.....	241.34
					Total schools and departments.....					
\$ 4,573,478.13	\$158,286.74	\$ 4,980.83	\$ 19,353.05	\$ 99,683.61	\$ 4,999,762.38	\$157,967.54	\$190,009.40	\$199,975.77	\$ 4,151.74	\$152,152.91

ENDOWMENT FUNDS—Continued

[illegible]

SUMMARY OF EXPENDABLE GIFTS

For the year ended August 31, 1947

Including approximately \$1,800,000 wholly committed for specific expenditure such as building funds and grants for special research projects, some of which are designated for use over a period of years.

	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
Scholarships and fellowships	\$ 131,062.53	\$ 167,178.49	\$ -2,524.99	\$ 382.48	\$157,608.59	\$ 138,489.92
Schools and departments	928,256.14	754,152.40	1,077,686.99	20,364.05	564,657.53	2,215,802.05
Other contributions	352.50	90,615.83	-59,851.65	482.40	17,181.68	14,417.40
Total expendable gifts	<u>\$1,059,671.17</u>	<u>\$1,011,946.72</u>	<u>\$1,015,310.35</u>	<u>\$21,228.93</u>	<u>\$739,447.80</u>	<u>\$2,368,709.37</u>
Transferred from endowment principal			\$1,022,423.61			
Transferred to endowment income			-14,837.50			
Transferred from special funds			1,474.24			
Appropriated from University funds for Hoover Library			6,250.00			
Income allowed invested funds				\$21,619.94		
Other				-391.01		
			<u>\$1,015,310.35</u>	<u>\$21,228.93</u>		

ANNUAL FINANCIAL REPORT

EXPENDABLE GIFTS
For the year Ended August 31, 1947

SCHOLARSHIPS AND FELLOWSHIPS:	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
<i>General:</i>						
Academy of Time fellowship	\$ 1,000.00	.....	.....	.....	\$ 1,000.00	.....
American Legion	143.00	.....	.....	.....	.....	143.00
Anonymous, for grants-in-aid .....	.....	499.96	\$ -43.34	.....	289.96	166.66
Anonymous scholarships	2,159.18	1,253.26	.....	.....	2,328.76	1,083.68
Atherton, Edwin N.	300.00	.....	.....	.....	300.00	.....
Boothe, D. Power, Sr. ....	.....	1,000.00	.....	.....	.....	1,000.00
Branmer Women's Club .....	.....	166.65	.....	.....	.....	166.65
Briggs, Ella	1,893.00	.....	.....	.....	643.00	1,250.00
Buck-of-the-Month contributions	8,960.66	14.00	772.34	.....	5,547.79	4,199.21
Buck-of-the-Month dues	729.00	1,174.75	-729.00	.....	1,174.75	.....
Cap and Gown .....	.....	500.00	.....	.....	500.00	.....
Chicago Stanford Club .....	.....	999.90	.....	.....	999.60	.....
Chi Psi .....	.....	200.00	.....	.....	200.00	.....
Clarendon fund .....	.....	675.00	.....	.....	.....	675.00
Class of 1924 .....	.....	137.32	.....	.....	.....	1,235.98
Class of 1926	1,098.66	2,945.85	.....	.....	.....	2,945.85
Coffroth, estate of James W. ....	.....	600.00	-600.00	.....	.....	.....
Collins, Robertson Earl, dimes for diplomas ..	232.00	.....	.....	.....	.....	232.00
Daughters of the Cincinnati .....	.....	300.00	.....	.....	300.00	.....
Dean of Students, student aid for men	1,183.29	1,000.00	600.00	.....	1,325.63	1,457.66
Dean of Students, student aid for women .....	.....	1,717.06	.....	.....	720.40	996.66
Gardiner, Gertrude .....	.....	200.00	.....	.....	200.00	.....
General scholarships	5,595.87	1,765.02	.....	.....	1,894.00	5,466.89
Guérard, Albert	1,000.00	.....	.....	.....	.....	1,000.00
Guérard, Nathaniel Greene, Jr.	500.00	700.00	.....	.....	500.00	700.00
Kinney Engineering Company	4,000.00	.....	.....	.....	.....	4,000.00
Lagunita Court Junior Women	150.00	150.00
Forward.....	\$ 28,794.66	\$ 15,998.77	\$ 18,073.89	\$ 26,719.54

ANNUAL FINANCIAL REPORT

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EXPENDABLE GIFTS—Continued

SCHOLARSHIPS AND FELLOWSHIPS:	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
Forwarded.....	\$ 28,794.66	\$ 15,998.77	.....	.....	\$ 18,073.89	\$ 26,719.54
<i>General (Cont'd):</i>						
Lanz, Henry	185.50	.....	.....	.....	.....	185.50
Newell, Henry	100.00	.....	\$ -100.00	.....	.....	.....
Newton, Douglass E.	97.00	480.00	.....	.....	240.00	337.00
Pawley, William D. ....	.....	949.30	.....	.....	1,260.95	-311.65
Pepsi-Cola .....	.....	2,833.05	.....	.....	2,833.05	.....
Roble Club	210.00	210.00	.....	.....	.....	.....
Servicemen's scholarship	10,479.51	5.77	.....	382.48	2,986.00	420.00
Silberman, David B., Jr. ....	.....	500.00	.....	\$	500.00	7,881.76
Stanford Alumni	198.03	3,057.00	.....	.....	3,166.65	.....
Stanford Bookstore	5.10	7,500.00	.....	.....	.....	88.38
Stanford Club of New York, New Jersey and Connecticut	508.00	448.00	.....	.....	499.95	7,505.10
Stanford Club of Seattle .....	.....	500.00	.....	.....	.....	456.05
Stanford fund	140.00	.....	.....	.....	.....	500.00
Stanford Gold Star .....	.....	7.00	.....	.....	.....	140.00
Stanford Women's Club, East Bay	200.00	.....	.....	.....	150.00	7.00
Stanford Women's Club, Los Angeles .....	.....	499.95	.....	.....	499.95	50.00
Stanford Women's Club, San Francisco	-115.00	460.00	.....	.....	345.00	.....
Stern, Ruth Lucie, boy scout	286.00	.....	.....	.....	.....	286.00
Student Aid Commission fund	3,884.15	.....	204.49	.....	2,678.05	1,410.59
Student aid scholarship	49.00	.....	-49.00	.....	.....	.....
Teague, Mrs. Harriet M.	12.00	.....	.....	.....	.....	12.00
True, Harry A., memorial	6.00	390.00	.....	.....	260.00	136.00
University scholarship	66.65	.....	.....	.....	.....	66.65
Valentine, W. L.	345.00	.....	.....	.....	.....	345.00
Women's Conference	400.00	.....	.....	.....	400.00	.....
Yost, Jacob and Mary	345.00	5.00	.....	.....	345.00	5.00
Forward.....	\$ 46,196.60	\$ 33,843.84	\$ 55.49	\$ 382.48	\$ 34,238.49	\$ 46,239.92

EXPENDABLE GIFTS—Continued

SCHOLARSHIPS AND FELLOWSHIPS:		Aug. 31, 1946	Gifts	Transfers	Changes	Appropriated	Aug. 31, 1947
Forwarded.....		\$ 46,196.60	\$ 33,843.84	\$ 55.49	\$ 382.48	\$ 34,238.49	\$ 46,239.92
<i>School of Biological Sciences:</i>							
General scholarship	32.50	.....	.....	.....	.....	.....	32.50
Lilly Research Laboratories, postdoctorate	230.14	.....	.....	.....	.....	.....	230.14
Standard Brands fellowship	1,400.00	.....	1,866.65	.....	.....	1,866.60	1,400.05
Hopkins Marine Station:							
Penicillin research, Merck & Co.	1,200.00	.....	.....	.....	.....	.....	1,200.00
Natural History Museum:							
Van Sicken, F. W., memorial in ichthyology ..	499.98	.....	500.00	.....	.....	333.30	666.68
<i>Graduate School of Business:</i>							
Commercial Credit Company	420.02	.....	1,000.00	.....	.....	1,000.00	420.02
Douglas Aircraft Company	1,000.00	.....	1,000.00	.....	.....	1,000.00	1,000.00
Eastman Kodak Company .....	.....	.....	750.00	.....	.....	750.00	.....
Standard Oil Company of California .....	.....	.....	1,500.00	.....	.....	.....	1,500.00
<i>School of Education:</i>							
Fletcher, Mrs. Mary E. ....	.....	.....	1,000.00	.....	.....	.....	1,000.00
General scholarship	84.00	.....	.....	.....	.....	.....	84.00
Physical Therapy:							
Kellogg, W. K., Foundation	853.00	.....	.....	.....	.....	.....	853.00
National Foundation for Infantile Paralysis, Inc., scholarships .....	.....	.....	14,468.80	.....	.....	14,468.80	.....
National Foundation for Infantile Paralysis, Inc., fellowships .....	.....	.....	5,000.00	.....	.....	5,000.00	.....
<i>School of Engineering:</i>							
General scholarship	331.50	.....	.....	.....	.....	.....	331.50
Hanrahan, William F.	2,028.00	.....	.....	.....	.....	.....	2,028.00
Standard Oil Company	340.00	.....	.....	.....	.....	.....	340.00
Civil Engineering:							
Anonymous .....	.....	.....	400.00	.....	.....	.....	400.00
Forward.....	\$ 54,615.74	\$ 60,329.29	\$ 55.49	\$ 382.48	\$ 57,657.19	\$ 57,725.81	

EXPENDABLE GIFTS—Continued

SCHOLARSHIPS AND FELLOWSHIPS:							
	Forwarded.....	Balances Aug. 31, 1946 \$ 54,615.74	Gifts \$ 60,329.29	Transfers \$ 55.49	Other Changes \$ 382.48	Appropriated \$ 57,657.19	Balances Aug. 31, 1947 \$ 57,725.81
<i>School of Engineering (Cont'd):</i>							
Electrical Engineering:							
Elliott, H. F.	410.00	.....	.....	.....	.....	.....	410.00
Hewlett-Packard fellowship	1,200.00	.....	.....	.....	.....	700.00	500.00
Hicks, W. Wesley, research fellowship	2,433.34	.....	1,000.00	.....	.....	1,000.00	2,433.34
Low, John Stewart	2,335.00	.....	15.00	.....	.....	.....	2,350.00
National Canners Association illumination research fellowship	2,500.00	.....	.....	.....	.....	2,207.86	292.14
Ryan, Harris J., in high-voltage	1,000.00	.....	500.00	.....	.....	500.00	1,000.00
Sperry Gyroscope graduate fellowship in electronics .....	.....	.....	1,000.00	.....	.....	.....	1,000.00
Sylvania Electric Products	333.34	.....	700.00	.....	.....	1,000.00	33.34
Westinghouse Electric Manufacturing Company	1,000.00	.....	1,000.00	.....	.....	2,000.00	.....
Mechanical Engineering:							
Consolidated Vultee Aircraft scholarship	250.00	.....	.....	.....	.....	.....	250.00
Consolidated Vultee Aircraft fellowship	750.00	.....	.....	.....	.....	750.00	.....
Douglas Aircraft Company fellowship in aeronautical engineering	1,000.00	.....	1,000.00	.....	.....	1,000.00	1,000.00
Standard Oil Company of California .....	.....	.....	1,499.95	.....	.....	.....	1,499.95
Westinghouse fellowship .....	.....	.....	1,000.00	.....	.....	.....	1,000.00
<i>School of Humanities:</i>							
Chinese cultural scholarships	500.00	.....	7,500.00	.....	.....	8,000.00	.....
English:							
Stanford fellowships in creative writing .....	.....	.....	15,000.00	.....	.....	302.11	14,697.89
Steiner, Doris Clayburgh	2,825.00	500.00	1,525.00	1,800.00
Forward.....	\$ 69,952.42	\$ 92,244.24	\$ 55.49	\$ 382.48	\$ 76,642.16	\$ 85,992.47	

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EXPENDABLE GIFTS—Continued

SCHOLARSHIPS AND FELLOWSHIPS:	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
Forwarded.....	\$ 69,952.42	\$ 92,244.24	\$ 55.49	\$ 382.48	\$ 76,642.16	\$ 85,992.47
<i>School of Humanities (Cont'd):</i>						
Romantic Languages:						
Vertrees, Nancy Catherine and Edgar, Spanish prize	100.00	100.00	.....	.....	200.00	.....
Speech and Drama:						
N.B.C.—Stanford radio	663.75	.....	.....	.....	.....	663.75
<i>Law School:</i>						
Borders, Harry L.	390.00	500.00	.....	.....	500.00	390.00
General scholarship	1,781.87	25.00	.....	.....	333.00	1,473.87
Lillick, Ira S.	68.30	.....	.....	.....	.....	68.30
Price, Francis, law review .....	.....	500.00	.....	.....	.....	500.00
Reynolds, Jim	60.00	-60.00	.....	.....	.....	.....
<i>Medical School:</i>						
Cancer Society fellowship .....	.....	6,250.00	.....	.....	500.00	5,750.00
Committee on War Services	225.00	200.00	.....	.....	200.00	225.00
Cutter Laboratories .....	.....	.....	.....	.....	.....	.....
Gamble, Elizabeth	04	.....	.....	.....	.....	.....
General scholarships	685.21	.....	.....	.....	.....	685.21
General fellowships	28,781.51	1,341.00	.....	.....	14,419.48	15,703.07
Kellogg, W. K., Foundation	10.00	.....	.....	.....	.....	10.00
Lederle Laboratories	250.00	.....	.....	.....	.....	250.00
Merrill, Charles E., war veterans	2,540.92	.....	.....	.....	2,500.00	40.92
Miller, C. O. G., for School of Nursing	75.00	.....	.....	.....	.....	75.00
Rockefeller assistantship fund	3,175.01	6,000.00	.....	.....	8,173.20	1,001.81
Weingarten fellowship .....	.....	1,500.00	.....	.....	250.00	1,250.00
Winthrop Chemical Company, in pharmacology	5,483.33	.....	.....	.....	950.00	4,533.33
Forward.....	\$ 114,242.36	\$ 108,600.24	\$ 55.49	\$ 382.48	\$ 104,667.84	\$ 118,612.73

EXPENDABLE GIFTS—Continued

SCHOLARSHIPS AND FELLOWSHIPS:	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
Forwarded.....	\$ 114,242.36	\$ 108,600.24	\$ 55.49	\$ 382.48	\$104,667.84	\$ 118,612.73
<i>School of Mineral Sciences:</i>						
American Smelting and Refining Company ...	1,600.00	3,900.00	.....	.....	1,500.00	4,000.00
Creole Petroleum Corporation .....	.....	166.65	.....	.....	166.65	.....
General .....	.....	25.00	.....	.....	.....	25.00
Imperial Oil graduate research fellowship .....	.....	1,000.00	.....	.....	1,000.00	.....
Shell Oil Company .....	.....	1,000.00	.....	.....	1,000.00	.....
Standard Oil Company of California	800.00	1,999.95	.....	.....	2,499.96	299.99
Tolman, John Van Steen, memorial	430.48	.....	—430.48	.....	.....	.....
<i>School of Physical Sciences:</i>						
<i>Chemistry:</i>						
Bristol-Myers fellowship	4,383.34	9,400.00	.....	.....	12,133.34	1,650.00
Colgate-Palmolive-Peet Company .....	.....	1,000.00	.....	.....	500.00	500.00
DuPont de Nemours fellowship	2,533.34	2,200.00	.....	.....	2,268.16	2,465.18
Food Machinery Corporation	100.00	.....	.....	.....	.....	100.00
General fellowships	252.00	.....	.....	.....	.....	252.00
General scholarships	92.00	.....	.....	.....	.....	92.00
Great Western Dow fellowship .....	.....	1,500.00	.....	.....	999.96	500.04
Lever Bros. Company, soap research .....	.....	.....	.....	.....	3,000.00	—3,000.00
Parke, Davis & Company .....	.....	2,000.00	.....	.....	1,428.30	571.70
Phi Lambda Upsilon award	20.00	.....	.....	.....	.....	20.00
Shell research fellowship	1,100.01	900.00	.....	.....	900.00	1,100.01
Sloan, W. H., scholarship	1,800.00	.....	—1,800.00	.....	.....	.....
Swift & Company nutrition fellowship	2,000.00	2,000.00	.....	.....	694.15	3,305.85
<i>Physics:</i>						
Permanente Metals Corporation, fellowship in electron optics	1,000.00	.....	.....	.....	.....	1,000.00
<i>School of Social Sciences:</i>						
General Education Board fellowships .....	.....	361.65	.....	.....	361.65	.....
<i>History:</i>						
Colonial Dames essay prize in American history .....	.....	100.00	.....	.....	100.00	.....
Forward.....	\$ 130,353.53	\$ 136,153.49	\$ —2,174.99	\$ 382.48	\$133,220.01	\$ 131,494.50

EXPENDABLE GIFTS—Continued

SCHOLARSHIPS AND FELLOWSHIPS:	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
Forwarded.....	\$ 130,353.53	\$ 136,153.49	\$ -2,174.99	\$ 382.48	\$133,220.01	\$ 131,494.50
<i>School of Social Sciences (Cont'd):</i>						
History:						
General scholarships	10.00	.....	.....	.....	.....	10.00
Journalism:						
Jacoby, Melville J.	350.00	.....	-350.00	.....	.....	.....
Political Science:						
General scholarship	15.00	.....	.....	.....	.....	15.00
Hollingsworth, Mildred and James .....	.....	500.00	.....	.....	.....	500.00
<i>Libraries:</i>						
Hoover Institute and Library:						
Rockefeller Foundation, for research in Slavonic studies .....	.....	30,000.00	.....	.....	23,888.58	6,111.42
<i>Department of Physical Education and Athletics:</i>						
Gimbel, J., athletic attitude award .....	.....	25.00	.....	.....	.....	25.00
Women's Athletic Association	334.00	500.00	.....	.....	500.00	334.00
Total scholarships and fellowships	\$ 131,062.53	\$ 167,178.49	\$ -2,524.99	\$ 382.48	\$157,608.59	\$ 138,489.92
<i>SCHOOLS AND DEPARTMENTS:</i>						
<i>General:</i>						
Brokaw, Ann Clare, literature and music fund \$	100.00	100.00	.....	.....	.....	200.00
Building improvements	5.00	505.00	.....	.....	\$ 465.37	44.63
Chancellor's office, general	350.00	.....	.....	.....	13.99	336.01
Columbia Foundation, for School of Public Service	935.00	.....	.....	.....	.....	935.00
Dean of Students, general	77.60	2.00	.....	.....	9.60	70.00
Forest Park Home Foundation survey .....	.....	15,000.00	.....	.....	.....	15,000.00
Frost, Laurence, amphitheatre .....	.....	2,623.79	.....	.....	.....	2,623.79
General Planning	1,011.00	.....	.....	.....	.....	1,011.00
General Secretary's office, general	35.95	.....	.....	.....	.....	35.95
Industrial Research Institute	426.31	.....	.....	\$ -426.31	.....	.....
Forward.....	\$ 2,940.86	\$ 15,607.00	\$ 2,623.79	\$ -426.31	\$ 488.96	\$ 20,256.38

EXPENDABLE GIFTS—Continued

SCHOOLS AND DEPARTMENTS:	Forwarded.....	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
	\$	\$	\$	\$	\$	\$	\$
<i>General (Cont'd):</i>							
Memorial Church, general		15.00	10.00	.....	.....	.....	25.00
Music listening room fund		334.86	70.00	.....	.....	111.54	293.32
Music records fund		26.00	-10.00	.....	.....	16.00	.....
President's contingent fund		1,000.00	.....	-1,000.00	.....	.....	.....
President's office, general		3,225.16	12,306.97	2,000.00	.....	3,832.66	13,699.47
Public Exercises Committee, general		35.00	.....	.....	.....	.....	35.00
Riding stables fund	218.78	.....	.....	.....	218.78
Sloss, Leon, fund		5,979.97	.....	-5,979.97	.....	.....	.....
Stanford land utilization survey		1,000.00	.....	-1,000.00	.....	.....	.....
Stern, Lucie, memorial fund for construction of residence hall for men	86,656.37	.....	1,408.44	.....	88,064.81
Tanner, Dean, memorial fund		400.00	.....	.....	.....	.....	400.00
<i>School of Biological Sciences:</i>							
General	805.00	.....	.....	.....	805.00
Knoche, estate of Louis H., for systematic botany	2,000.00	.....	.....	.....	2,000.00
Taylor, C. V., memorial book fund		542.42	.....	.....	.....	51.02	491.40
Biology:							
American Academy of Arts and Sciences, for DuShane	181.50	.....	.....	.....	181.50
General		73.50	242.50	.....	.....	.....	316.00
Nutrition Foundation, for research		516.77	.....	.....	.....	.....	516.77
Rockefeller Foundation, for chemophysical biology under Dr. Whitaker		110,666.22	.....	.....	3,990.60	16,220.74	98,436.08
Hopkins Marine Station:							
General		665.00	100.00	.....	.....	559.00	206.00
Forward.....	\$	\$ 127,420.76	\$ 118,188.12	\$ -3,356.18	\$ 4,972.73	\$ 21,279.92	\$ 225,945.51

EXPENDABLE GIFTS—Continued

SCHOOLS AND DEPARTMENTS:	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
Forwarded.....	\$ 127,420.76	\$ 118,188.12	\$ -3,356.18	\$ 4,972.73	\$ 21,279.92	\$ 225,945.51
<i>School of Biological Sciences (Cont'd):</i>						
Natural History Museum:						
American Philosophical Society, for research by Reed C. Rollins	619.10	155.00	.....	.....	369.51	249.59
Dudley Herbarium, general	480.00	.....	.....	.....	68.00	567.00
Field trips and research by Dr. Gordon Floyd Ferris	300.00	.....	.....	.....	35.00	265.00
Field trips and research by Dr. Ira L. Wiggins	300.00	900.00	.....	.....	127.54	1,072.46
General	482.58	142.50	.....	.....	68.00	557.08
Jordan library of ichthyology	100.00	15.00	.....	.....	12.45	102.55
<i>Graduate School of Business:</i>						
Fireman's Fund idea survey	703.00	1,066.00	.....	.....	288.97	-288.97
General	560.76	160.00	.....	.....	239.63	1,529.37
Library books .....	.....	1,000.00	.....	.....	116.88	603.88
Metropolitan Life Insurance idea survey .....	.....	.....	.....	.....	249.65	750.35
<i>School of Education:</i>						
Book fund from royalties	199.18	25.88	.....	.....	.....	225.06
Carnegie Corporation of New York, for Dr. Cowley .....	.....	1,500.00	.....	.....	55.22	1,444.78
Carnegie workshop	94.58	.....	.....	.....	.....	94.58
Cooperative educational fund	414.23	.....	.....	.....	.....	414.23
Craty, Allan A. and Inez P., fund .....	.....	.....	42,261.20	.....	.....	42,261.20
Craty, Gordon B. and Beatrice B., fund .....	.....	.....	42,261.20	.....	.....	42,261.20
Cubberley, Mrs. Ellwood P., for education building .....	.....	2,268.49	.....	.....	2,268.49	.....
General	432.70	525.00	.....	.....	154.24	803.46
General Education Board, for investigation in social education	512.66	.....	.....	.....	-22.76	535.42
Intercultural workshop	54.97	.....	.....	.....	.....	54.97
Kefauver, Grayson Neikirk, memorial	423.39	201.00	.....	.....	.....	624.39
Kefauver portrait fund .....	.....	537.15	.....	.....	537.15	.....
Language arts	169.83	94.20	.....	.....	.....	264.03
United Airlines research fund	440.00	300.00	140.00
Forward.....	\$ 133,707.74	\$ 126,778.34	\$ 81,166.22	\$ 4,972.73	\$ 26,147.89	\$ 320,477.14

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EXPENDABLE GIFTS—Continued

SCHOOLS AND DEPARTMENTS:	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
Forwarded.....	\$ 133,707.74	\$ 126,778.34	\$ 81,166.22	\$ 4,972.73	\$ 26,147.89	\$ 320,477.14
<i>School of Education (Cont'd):</i>						
Physical Therapy:						
General	105.54	6.00	.....	.....	.....	111.54
National Foundation for Infantile Paralysis, Inc., epidemic aid program	1,145.51	-1,145.51	.....	.....	.....	.....
National Foundation for Infantile Paralysis, Inc., general grant .....	.....	60,000.00	.....	.....	22,687.95	37,312.05
National Foundation for Infantile Paralysis, Inc., muscle testing	156.40	-156.40	.....	.....	.....	.....
National Foundation for Infantile Paralysis, Inc., for preparation of illustrations on posture and body mechanics	3,384.10	.....	.....	.....	1,000.00	2,384.10
National Foundation for Infantile Paralysis, Inc., research in myodynamy .....	.....	6,000.00	.....	.....	350.65	5,649.35
National Foundation for Infantile Paralysis, Inc., student training	1,760.68	-1,760.68	.....	.....	.....	.....
<i>School of Engineering:</i>						
General	10,114.89	2,828.55	.....	.....	391.33	12,552.11
Lagodzinski, Louis, for books	100.00	.....	.....	.....	.....	100.00
Library, general	5.00	25.00	.....	.....	.....	30.00
Moreno memorial book fund	52.09	.....	.....	.....	.....	52.09
Civil Engineering:						
Anonymous	2,722.89	.....	.....	.....	155.21	2,567.68
General	440.58	148.00	.....	.....	588.58	.....
Electrical Engineering:						
Federal Telephone & Radio Corporation	652.64	847.75	-1.22	.....	198.34	1,300.83
General	4,789.18	431.33	-3,103.30	.....	-76.42	2,193.63
Heintz, Ralph M. ....	.....	.....	3,103.30	.....	2,086.45	1,016.85
International Standard Electric Corporation, for international telephone and telegraph projects	-1.22	.....	1.22	.....	.....	.....
International Standard Electric Corporation, for research	12,435.89	.....	.....	.....	2,200.16	10,235.73
Forward.....	\$ 171,571.91	\$ 194,002.38	\$ 81,166.22	\$ 4,972.73	\$ 55,730.14	\$ 395,983.10

EXPENDABLE GIFTS—Continued

SCHOOLS AND DEPARTMENTS:	Forwarded.....	Balances Aug. 31, 1946 \$ 171,571.91	Gifts \$ 194,002.38	Transfers \$ 81,166.22	Other Changes \$ 4,972.73	Appropriated \$ 55,730.14	Balances Aug. 31, 1947 \$ 395,983.10
<i>School of Engineering (Cont'd):</i>							
Electrical Engineering:							
Ryan laboratory, general	2,221.86						2,221.86
Sperry Gyroscope Company, for microwave radio	608.77					608.77	
Sperry Gyroscope Company, for microwave No. 3	336.99					336.99	
Wesix electrical heating research	3,000.00						3,000.00
Mechanical engineering:							
General	552.21		172.50				724.71
Guggenheim laboratory, general	16.03						16.03
Vibration research fund	1,640.21					45.08	1,595.13
<i>School of Humanities:</i>							
General	6,322.48		508.00			903.14	5,927.34
Letters, School of	35.00					35.00	
Marble, John E.	1,000.00						1,000.00
Viking Fund, Inc.	848.42						848.42
Viking Fund, Inc., for books, far-eastern area ..	35.61					12.59	23.02
Viking Fund, Inc., for Pacific studies	528.05					290.92	237.13
Viking Fund, Inc., for research and educational activities; and cultural aspects of civilization ..			25,000.00			3,180.49	21,819.51
Visiting lectureship	3,250.00						3,250.00
Asiatic and Slavic:							
Rockefeller Foundation, for development of Far-Eastern and Slavic studies	—750.00		6,000.00			6,000.00	—750.00
Rockefeller Foundation, for development of Pacific, Eastern Asia & Russian Area studies	398.61		9,601.39			10,000.00	
Forward.....	\$ 191,616.15	\$ 235,284.27	\$ 81,166.22	\$ 4,972.73	\$ 77,143.12	\$ 435,896.25	

EXPENDABLE GIFTS—Continued

SCHOOLS AND DEPARTMENTS:	Forwarded.....	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
<i>School of Humanities (Cont'd)</i>		\$ 191,616.15	\$ 235,284.27	\$ 81,166.22	\$ 4,972.73	\$ 77,143.12	\$ 435,896.25
Classics:							
General .....		.....	5.00	.....	.....	.....	5.00
English:							
General		82.74	80.75	.....	.....	49.92	113.57
Rosenberg Foundation		550.38	.....	.....	.....	10.00	540.38
German:							
General		187.31	141.00	.....	.....	.....	328.31
Graphic Arts:							
General		223.00	257.00	.....	.....	406.13	73.87
Graphic Art Fund		369.00	.....	.....	.....	369.00	.....
Museum and art gallery, general		10.00	5.00	.....	.....	.....	15.00
Travel and study of Far-Eastern art .....		.....	500.00	.....	.....	.....	500.00
Music:							
General		34.29	63.50	.....	.....	97.79	.....
Music building fund .....		.....	.....	13,563.23	.....	.....	13,563.23
Sloss, Leon, music fund .....		.....	.....	5,979.97	.....	2,851.90	3,128.07
Philosophy:							
General .....		.....	5.00	.....	.....	.....	5.00
Romantic Languages:							
General .....		.....	8.69	.....	.....	.....	8.69
Speech and Drama:							
Dramatic Council, for drama library		75.00	.....	.....	.....	.....	75.00
General		670.34	251.00	.....	.....	.....	921.34
National Theatre Conference .....		.....	2,250.00	.....	.....	.....	2,250.00
Speech clinic and speech correction		635.00	1,625.00	.....	.....	537.95	1,722.05
Forward.....	\$ 194,453.21	\$ 240,476.21	\$ 100,709.42	\$ 4,972.73	\$ 81,465.81	\$ 459,145.76	

EXPENDABLE GIFTS—Continued

SCHOOLS AND DEPARTMENTS:	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
-Forwarded.....	\$ 194,453.21	\$ 240,476.21	\$ 100,709.42	\$ 4,972.73	\$ 81,465.81	\$ 459,145.76
<i>Law School:</i>						
Crothers hall fund	126,824.17	—310.00	—1,871.35	5,704.01	14,009.25	118,518.93
General	2,011.35	2.50	360.00	.....	2,802.01	—170.00
Library book fund	2,439.51	130.00	.....	.....	138.94	99.49
Price, Francis	108.43	46,627.01	30,713.78	4,692.86	16,007.05	139,215.72
Stanford Law School plan	73,189.12	.....	.....	.....	.....	.....
<i>Medical School:</i>						
Alameda County Tuberculosis and Health Association, for Dr. Raffel .....	.....	10,000.00	.....	.....	5,421.83	4,578.17
American Medical Association, for Dr. Addis .....	.....	1,000.00	.....	.....	6.87	993.13
American Medical Association grant for Dr. Cutting .....	.....	300.00	.....	.....	300.00	.....
American Medical Association, for Dr. Greulich	300.00	.....	.....	.....	300.00	.....
American Medical Association, for Dr. Hanzlik .....	.....	200.00	.....	.....	45.88	154.12
Anatomy department, general	25.00	50.00	.....	.....	.....	75.00
Anesthesiology postgraduate fund .....	.....	500.00	.....	.....	.....	500.00
Anonymous gifts, cancer statistics	74.90	.....	.....	.....	30.00	44.90
Anonymous gifts, current	625.00	.....	.....	.....	.....	625.00
Anonymous gifts, diabetes	348.91	.....	.....	.....	.....	348.91
Anonymous, for psychiatry	1,972.69	2,000.00	.....	.....	109.45	3,863.24
Anonymous, for research by Dr. Baumberger ..	600.00	400.00	.....	.....	86.75	913.25
Anonymous, postgraduate fund	100.00	.....	.....	.....	.....	100.00
Bacteriology department, general	5.00	10.00	.....	.....	.....	15.00
Barkan, Otto, glaucoma fund	50.00	50.00	.....	.....	.....	100.00
Blake research fund, for Haman .....	.....	200.00	.....	.....	25.11	174.89
Blanding, Gordon .....	.....	.....	107,900.00	.....	.....	107,900.00
Bloomfield, Dr., laboratory fund	262.38	2,020.00	.....	.....	2,162.62	119.76
Borden Company Foundation, Inc., for undergraduate research award	2,500.00	.....	.....	.....	.....	2,500.00
Bortley, Dr., ophthalmology fund	115.00	.....	.....	.....	.....	115.00
Forward.....	\$ 406,004.67	\$ 303,655.72	\$ 237,811.85	\$ 15,369.60	\$ 122,911.57	\$ 839,930.27

EXPENDABLE GIFTS—Continued

SCHOOLS AND DEPARTMENTS:	Forwarded.....	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
<i>Medical School (Cont'd):</i>							
Briggs, Wallace A., free-bed fund	4,060.66		3,300.00	.....	.....	.....	7,360.66
Bright's disease, general .....	.....		250.00	.....	.....	.....	250.00
Brodie infantile paralysis fund	526.73		150.00	.....	.....	.....	676.73
Broemmel research fund	334.78		.....	.....	.....	204.87	129.91
Brush Foundation, for enzyme research	950.00		5,025.00	.....	.....	3,404.18	2,570.82
Brush Foundation, for research by Dr. Greulich	1,000.32		4,050.00	.....	.....	4,912.75	137.57
California Tuberculosis Association, for Dr. Raffel	583.38		2,700.00	.....	.....	3,342.29	—58.91
Cancer Society fund .....	.....		3,500.00	.....	.....	2,098.16	1,401.84
Cancer Society fund, for Lane .....	.....		6,000.00	.....	.....	1,638.42	4,361.58
Carbitol research, pharmacology	1,175.84		.....	.....	.....	1,175.84	.....
Cardiovascular free bed fund .....	.....		500.00	.....	.....	.....	500.00
Carnegie Corporation of New York, for research by Dr. Greulich	619.45		.....	.....	.....	100.00	519.45
Child guidance, general	58.85		.....	.....	.....	58.85	.....
Commonwealth Fund	665.89		.....	.....	—89.70	576.19	.....
Community Chest appliance fund	334.48		.....	.....	.....	—411.47	745.95
Community Chest convalescent care fund	225.97		.....	.....	.....	218.00	7.97
Crippled children, Chandler	100.00		.....	.....	.....	.....	100.00
Crippled children, ear, nose, throat	50.00		.....	.....	.....	.....	50.00
Crippled children's eye fund	85.84		125.00	.....	.....	.....	210.84
Crippled children, orthopedic	3,168.65		5,885.60	.....	.....	3,606.34	5,447.91
Crippled children, surgical	818.82		523.00	.....	.....	.....	1,341.82
Dean's special fund	360.41		9,000.00	.....	.....	2,500.84	6,859.57
Denbigh cancer research fund	2,473.45		.....	.....	.....	.....	2,473.45
Edwards, Frances Coffin, medical science building fund .....	.....		.....	702,911.57	.....	.....	702,911.57
Eloesser, Dr., library fund	33.94		.....	.....	.....	39.65	—5.71
Eloesser, Dr., surgical free beds	1,547.70		.....	.....	.....	.....	1,547.70
Emergency cancer research, Emge	7,300.48		250.00	.....	.....	.....	7,550.48
Eye bank fund .....	.....		500.00	.....	.....	.....	500.00
Forward.....	\$ 432,480.31		\$ 345,414.32	\$ 940,723.42	\$ 15,279.90	\$ 146,376.48	\$ 1,587,521.47

EXPENDABLE GIFTS—Continued

SCHOOLS AND DEPARTMENTS:	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
Forwarded.....	\$ 432,480.31	\$ 345,414.32	\$ 940,723.42	\$ 15,279.90	\$ 146,376.48	\$ 1,587,521.47
<i>Medical School (Cont'd):</i>						
Eye free beds	282.65	.....	.....	.....	.....	282.65
Eye, nose and throat, general	279.12	978.87	.....	.....	6.58	1,251.41
Fender, Dr., for research equipment	8.22	.....	.....	.....	.....	8.22
Fluid research, campus	283.44	.....	.....	.....	.....	283.44
Frost, Howard, infantile paralysis research for Dr. Schultz	10,999.75	.....	.....	.....	6,989.30	4,010.45
Gamble fund for Bright's disease	5,000.00	.....	.....	.....	3,541.56	1,458.44
Gerbode, Dr. and Mrs. F. L. A., poliomyelitis free-bed fund	679.89	.....	.....	.....	32.91	646.98
Gimbel, Jake, sex psychology lectures	1,000.00	1,000.00	.....	.....	1,000.00	.....
Harvey cancer research fund	1,000.00	1,000.00	.....	.....	150.40	1,849.60
Hendry medical fund	10,703.61	.....	.....	.....	.....	10,703.61
Hospital improvement fund	2,550.20	370.00	.....	.....	860.00	2,060.20
Howell, Joan, free-bed fund	2.38	330.00	.....	.....	313.15	19.23
Hurwitz, Dr., postgraduate fund	28.51	.....	.....	.....	18.30	10.21
Institute of Industrial Hygiene	15,355.88	.....	.....	.....	.....	15,355.88
Irradiated Evaporated Milk Formula Technic Committee	789.08	.....	.....	.....	27.04	762.04
James Foundation .....	.....	10,000.00	.....	.....	7,397.71	2,602.29
Kelly fund, for obstetrics and gynecology .....	.....	175.00	.....	.....	.....	175.00
Kinney neurological research fund	8,500.58	.....	.....	.....	.....	8,500.58
Lane medical library books	8,589.43	2,200.00	.....	.....	4.65	10,784.78
Levy free-bed fund, ophthalmology	170.03	15.00	.....	.....	.....	185.03
Lewis, Dr., cardiology research	210.00	755.00	.....	.....	.....	965.00
Life Insurance grant, Rantz .....	.....	3,675.00	.....	.....	465.00	3,210.00
Life Insurance Medical Research fund for physiology department .....	.....	437.00	.....	.....	326.33	110.67
Lilly, Eli, and Company, for Cheney .....	.....	1,200.00	.....	.....	338.05	861.95
Markle, John and Mary R., Foundation	86.32	1,700.00	.....	.....	1,918.05	-131.73
McCarthy, Charles F. and Mary M., for anemia research	3,632.40	.....	.....	.....	1,690.05	1,942.35
Medical department library fund	1,782.93	1,000.00	.....	.....	1,008.94	1,773.99
Forward.....	\$ 503,414.73	\$ 370,250.19	\$ 940,723.42	\$ 15,279.90	\$ 172,464.50	\$ 1,657,203.74

EXPENDABLE GIFTS—Continued

SCHOOLS AND DEPARTMENTS:	Forwarded.....	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
<i>Medical School (Cont'd):</i>							
Medical free bed fund	390.80	115.00	.....	.....	.....	.....	505.80
Medical postgraduate fund .....	.....	250.00	.....	.....	.....	.....	250.00
Medical progress fund	3,561.19	.....	.....	.....	.....	.....	3,561.19
Medical School building fund .....	.....	.....	1,964.65	.....	.....	.....	1,964.65
Medical School, general	7,684.07	6,948.00	.....	.....	10,322.27	.....	4,309.80
Medicine, department of, general .....	.....	628.68	.....	.....	17.50	.....	611.18
Meininger dermatology fund	94.83	.....	.....	.....	5.66	.....	89.17
Michelson research fund	3,382.99	.....	.....	.....	.....	460.46	2,922.53
Mills, Dorothy and Gwladys, pediatric free-bed fund	742.00	350.00	.....	.....	.....	737.30	354.70
National Foundation for Infantile Paralysis, Inc., for Dr. Faber	7,562.24	16,411.54	.....	.....	.....	16,829.12	7,144.66
National Research Council, Ziegler .....	.....	1,000.00	.....	.....	.....	602.99	397.01
National Tuberculosis Association, for research by Dr. Raffel	-1,148.20	2,880.65	.....	.....	.....	2,351.65	-619.20
Neurology free-bed fund	84.75	.....	.....	.....	.....	.....	84.75
Neuropsychiatry, for Dr. Johnson	311.04	1,000.00	.....	.....	.....	.....	1,311.04
Neurosurgical fund	120.00	.....	.....	.....	.....	.....	120.00
Nursery building fund .....	.....	10,000.00	.....	.....	227.50	.....	10,227.50
Nursing School, general	246.30	86.00	.....	.....	.....	.....	332.30
Nutrition Foundation fund	2,140.00	2,500.00	.....	.....	.....	3,468.94	1,171.06
Obstetrics and gynecology free beds	856.64	60.00	.....	.....	.....	.....	916.64
Obstetrics and gynecology fund	135.39	.....	.....	.....	.....	.....	135.39
Obstetrics and gynecology, general	2,046.59	27.50	.....	.....	.....	.....	2,074.09
Obstetrics and gynecology, postgraduate fund .....	.....	500.00	.....	.....	.....	.....	500.00
Ophthalmology, general	1,360.97	22.50	.....	.....	.....	1,363.56	19.91
Ophthalmology, out-patient department	7,362.21	.....	.....	.....	.....	.....	7,362.21
Ophthalmology postgraduate fund .....	.....	500.00	.....	.....	.....	.....	500.00
Orthopedic free-bed fund	35.32	.....	.....	.....	.....	.....	35.32
Orthopedic, general	2,416.87	875.00	.....	.....	.....	408.74	2,883.13
Out-patient department, general	500.00	.....	.....	.....	.....	.....	500.00
Pathology, general	296.00	.....	.....	.....	.....	.....	296.00
Pediatric free beds, general	32.00	.....	.....	.....	.....	.....	32.00
Forward.....	\$ 543,628.73	\$ 414,405.06	\$ 942,688.07	\$ 15,507.40	\$ 209,032.69	\$ 1,707,196.57	

EXPENDABLE GIFTS—Continued

SCHOOLS AND DEPARTMENTS:	Forwarded.....	Balances Aug. 31, 1946	Gifts	Transfers	Changes	Appropriated	Aug. 31, 1947
		\$ 543,628.73	\$ 414,405.06	\$ 942,688.07	\$ 15,507.40	\$ 209,032.69	\$ 1,707,196.57
<i>Medical School (Cont'd):</i>							
Pediatrics, general	5,706.08	3,185.00	.....	.....	.....	1,148.81	7,742.27
Penicillin research under Dr. Clifton	28.66	.....	.....	.....	.....	.....	28.66
Physical therapy, general	102.05	.....	.....	.....	.....	.....	102.05
Physiology department, general	10.00	.....	.....	.....	.....	.....	10.00
Poliomyelitis free beds	5.00	.....	.....	.....	.....	.....	5.00
Postgraduate fund, Dr. Mathewson	500.00	.....	.....	.....	.....	180.00	320.00
Proctor fund, ophthalmology	7,826.83	15,000.00	.....	.....	.....	2,904.17	19,922.66
Public health department, general	35.00	288.39	.....	.....	.....	.....	323.39
Red Cross fund, Rytland .....	.....	240.00	.....	.....	.....	90.00	150.00
Robson, Kernan, for research on nerve tracts of the brain	776.14	.....	.....	.....	.....	776.14	.....
Robson arthritis fund	203.74	.....	.....	.....	.....	146.71	57.03
Robson fund, medicine	52.69	.....	.....	.....	.....	52.69	.....
Rockefeller chemistry fund, Evans	2,000.00	.....	.....	.....	.....	802.01	1,197.99
Rockefeller Fund, Evans and Calvin	1,000.00	.....	.....	.....	.....	820.00	180.00
Rosenberg Foundation, for study of valley fever	896.21	.....	.....	.....	.....	-1,075.01	1,971.22
Schilling, Agnes Lemme, fund	15,896.75	5,130.46	.....	.....	.....	4,550.00	16,477.21
Shainwald fund for pediatrics research	600.00	1,000.00	.....	.....	.....	.....	1,000.00
Stacey manuscript fund .....	.....	.....	.....	.....	.....	.....	600.00
Stanford Clinics Auxiliary and San Francisco Maternity .....	.....	.....	62,822.25	.....	.....	.....	62,822.25
Stern research, for Hanzlik .....	.....	5,500.00	.....	.....	.....	.....	5,500.00
Strauss laboratory fund	7,091.24	.....	.....	.....	.....	3,823.06	3,268.18
Superintendent's free-bed fund	9.57	639.40	.....	.....	.....	552.80	96.17
Surgery, general	497.50	1,250.00	.....	.....	.....	.....	1,747.50
Surgical free-bed fund	1,160.88	.....	.....	.....	.....	.....	1,160.88
Surgical postgraduate fund, San Francisco Hospital	197.21	250.00	.....	.....	.....	.....	250.00
Surgical resident's free-bed fund	1,565.00	43.00	.....	.....	.....	.....	197.21
Travel fund, surgery .....	.....	.....	.....	.....	.....	.....	1,608.00
Forward.....	\$ 589,789.28	\$ 446,931.31	\$ 1,005,510.32	\$ 15,507.40	\$ 223,804.07	\$ 1,833,934.24	

EXPENDABLE GIFTS—Continued

SCHOOLS AND DEPARTMENTS:	Forwarded.....	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
<i>Medical School (Cont'd):</i>							
Tropical Disease Foundation	172.81					172.81	
Tumor clinic fund	2,159.21		405.00			1,158.52	1,405.69
Tyde research fund			1,725.00			650.00	1,075.00
U. S. Public Health Service, for Dr. Addis	9,000.00		4,131.00			9,665.80	3,465.20
U. S. Public Health Service, for Dr. Barnett	68.66					40.00	28.66
U. S. Public Health Service, for Dr. Cutting			4,800.00			3,762.74	1,037.26
U. S. Public Health Service, penicillin	2,630.32		1,541.93			3,069.62	1,102.63
Urology department special fund	799.10					20.53	778.57
Volkman cancer research fund			5,000.00				5,000.00
Walter-Lawler leukemia fund	4,412.44		2,000.00			1,357.06	3,055.38
Walter research fund	647.10		110.00				2,000.00
Warren, Lois Gordon, fund							757.10
Weigle, Marion, memorial fund for nephritis research	510.00		43.00			12.00	541.00
Wells fund, therapeutics	250.00					249.52	.48
Whooping cough research	21.15						21.15
Wine Advisory Board, alcohol research by Johnson	1,610.42					1,218.01	392.41
Wright's cholesterol fund	80.00						80.00
Wyckoff, Dr., anonymous gifts	775.75					4.75	771.00
<i>School of Mineral Sciences:</i>							
Gallier microphotograph laboratory			1,313.00				1,313.00
General	2,623.39		31,764.50			14,839.63	19,548.26
Metallurgical laboratory, equipment			100.00				100.00
Orcutt, William Warren, memorial	500.00						500.00
Research Corporation, for slag control	120.81					41.00	79.81
Valentine, W. L., memorial	65,547.88					25,162.77	40,385.11
<i>School of Physical Sciences:</i>							
General	238.21		156.00				394.21
<i>Chemistry:</i>							
American Cancer Society, Inc., for Dr. Luck	1,030.00		5,932.50			4,371.88	2,590.62
Bristol-Myers Co., for assistants	3,150.00			-2,648.79		139.08	362.13
Forward.....	\$ 686,136.53	\$ 505,953.24	\$ 1,002,861.53	\$ 15,507.40	\$ 289,739.79	\$ 1,920,718.91	

EXPENDABLE GIFTS—Continued

SCHOOLS AND DEPARTMENTS:	Forwarded.....	\$ 686,136.53	\$ 505,953.24	\$ 1,002,861.53	\$ 15,507.40	\$ 289,739.79	\$ 1,920,718.91
		Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
<i>School of Physical Sciences (Cont'd):</i>							
Chemistry:							
California Division of Fish and Game, for Dr. Luck	—2,516.49			2,648.79		132.30	.....
Cottrell, Frederick Gardner, grant for stereochemistry		3,600.00					3,600.00
Cutter Laboratories, for Dr. Loring	133.23					115.96	17.27
Cutter Laboratories, for Dr. Luck	2,819.24					2,261.30	557.94
Cycloparaffin research project, Phillips Petroleum Company	26.95					26.95	.....
General	8,961.33	283.00		—283.07		348.65	8,612.61
General, for salaries	300.00					.....	300.00
Jergens Co., Andrew, for purchase of x-ray equipment	290.00						290.00
Lilly, Eli and Company, for Dr. Loring		7,000.00				684.70	6,315.30
National Colloid symposium		650.00		283.07		749.87	183.20
National Foundation for Infantile Paralysis, Inc., Dr. Loring	9,922.28						—825.12
Nutrition Foundation, Dr. Luck	3,493.01					10,747.40	3,336.59
Quaker Oats Company, Dr. Parks		1,000.00				156.42	679.17
Research Corporation, Dr. Leighton	4,800.00					320.83	3,176.36
Research Corporation, Dr. McBain	51.49					1,623.64	8.44
Rockefeller Foundation, Dr. Luck	3,530.89	4,250.00				43.05	—85.58
Rockefeller Foundation, research in biochemis- try under Dr. Loring	—48.16	4,000.00				7,866.47	957.16
Mathematics:							
Anonymous	2,722.88					2,994.68	516.51
General	60.00	5.00				2,206.37	.....
Physics:							
Electronics laboratory building fund				64,623.69			64,623.69
General	10.00	2,005.00				1,963.93	51.07
Research Corporation, Dr. Bloch	3,057.89	6,000.00				2,087.09	6,970.80
Rockefeller Foundation, electron microscope	1,507.74			1,474.24		48.75	2,933.23
		\$ 725,258.81	\$ 534,745.24	\$ 1,071,608.25	\$ 15,507.40	\$ 324,183.15	\$ 2,022,937.55

ANNUAL FINANCIAL REPORT

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EXPENDABLE GIFTS—Continued

SCHOOLS AND DEPARTMENTS:	Forwarded.....	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
<i>School of Physical Sciences (Cont'd):</i>							
Physics:							
Sperry Gyroscope Company, klystron research project .....		.....	10,000.00	.....	.....	25,989.18	-15,989.18
Sperry Gyroscope Company, for microwave special fund		9,072.10	.....	.....	.....	2,573.40	6,498.70
Sperry Gyroscope Company, for microwave research No. 4		-11,147.35	20,000.00	.....	.....	19,134.55	-10,281.90
<i>School of Social Sciences:</i>							
General		539.25	377.00	.....	.....	.....	916.25
Rockefeller Foundation, Laura Spellman Fund		8,358.42	41.30	.....	.....	1,924.28	6,475.44
Economics:							
General		472.35	105.00	.....	.....	.....	577.35
Miller, C. O. G., fund, for study of the purchasing power of gold		480.58	.....	.....	.....	.....	480.58
Food Research:							
General		405.00	10.00	.....	.....	.....	415.00
Graham, 1945-46		5,329.43	.....	.....	.....	4,242.89	1,086.54
Rockefeller Foundation, Dodoff .....		.....	4,000.00	.....	.....	.....	4,000.00
Rockefeller Foundation, general		140.20	.....	.....	.....	140.20	.....
Rockefeller Foundation, for history of food and agriculture during World War II .....		.....	60,000.00	.....	.....	59,644.15	355.85
History:							
Anonymous, for books		339.42	.....	.....	.....	121.93	217.49
General		329.54	73.00	.....	.....	.....	402.54
Institute of American History		14,613.92	.....	.....	.....	2,875.57	11,738.35
Journalism:							
General		164.50	72.50	.....	.....	.....	237.00
Library .....		.....	1,000.00	.....	.....	75.84	924.16
Forward.....	\$ 754,356.17	\$ 630,425.04	\$1,071,608.25	\$15,507.40	\$440,905.14	\$2,030,991.72	

EXPENDABLE GIFTS—Continued

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ANNUAL FINANCIAL REPORT

SCHOOLS AND DEPARTMENTS:	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
Forwarded.....	\$ 754,356.17	\$ 630,425.04	\$ 1,071,608.25	\$ 15,507.40	\$ 440,905.14	\$ 2,030,991.72
<i>School of Social Sciences (Cont'd):</i>						
Political Science:						
Foundation for American Citizenship grant for Prof. Conner	.....	170.00	.....	.....	170.00	559.10
General	637.68	167.50	.....	.....	246.08	.....
Psychology:						
Alcohol research	678.95	.....	.....	.....	43.20	635.75
Carnegie Corporation of New York, for study of psychology of later maturity	484.58	-484.58	.....	.....	.....	305.00
Columbia Foundation, for Dr. Terman	450.00	.....	.....	.....	145.00	1,253.53
Electro-shock fund, Stone .....	.....	2,400.00	.....	.....	1,146.47	65.49
Gamble, Elizabeth, research by Stone	108.79	.....	.....	.....	43.30	.....
General	133.50	27.00	.....	.....	.....	160.50
Snedden, Donald Scott, library fund	171.26	.....	-171.26	.....	.....	.....
Terman special fund for follow-up of gifted subjects .....	.....	6,005.00	.....	.....	3,585.77	3,105.06
U. S. Public Health Service training grant for clinical psychologists	685.83	.....	.....	.....	.....	16,592.00
Workshop on community leadership	970.00	16,592.00	.....	.....	342.16	.....
<i>Libraries:</i>						
University Library:						
Bewley, Edward N.	559.24	25.00	.....	.....	.....	584.24
Books, general	2,703.50	194.38	-2,897.88	.....	.....	21,854.17
Collection of musical manuscripts, anonymous. General	4,000.00	25,000.00	3,149.82	.....	10,295.65	1,548.59
Guiberson, Nat G., Jr., memorial	1,603.48	238.84	-251.94	.....	41.79	50.00
Memorial fund at Stanford	50.00	.....	.....	.....	2,050.55	3,667.37
Motz, Arthur F.	4,425.46	1,287.46	5.00	.....	.....	.....
.....	5.00	.....	-5.00	.....	.....	.....
Hoover Institute and Library:						
American Children's fund	61,015.29	.....	.....	1,348.71	49,694.44	12,669.56
ARA Benefit trust	11,416.00	.....	.....	255.68	11,182.77	488.91
Briggs Trust, Latin-American studies	1,351.63	1,200.00	.....	.....	52.68	2,498.95
General	2,856.61	24,779.01	.....	.....	10,522.81	17,112.81
Hoover, Lou Henry, memorial fund	15,571.56	1,000.00	6,250.00	1,140.92	.....	23,962.48
Forwarded.....	\$ 854,234.53	\$ 708,398.81	\$ 1,077,686.99	\$ 18,252.71	\$ 530,467.81	\$ 2,138,105.23

EXPENDABLE GIFTS—Continued

SCHOOLS AND DEPARTMENTS:	Balances Aug. 31, 1946	Gifts	Transfers	Other Changes	Appropriated	Balances Aug. 31, 1947
<i>Libraries (Cont'd):</i>						
Forwarded.....	\$ 864,234.53	\$ 708,398.81	\$1,077,686.99	\$18,252.71	\$530,467.81	\$2,138,105.23
Hoover Institute and Library:						
J. M. Foundation, for development	21,892.28			499.86	10,464.82	11,927.32
Milbank operations fund	25,083.33	25,000.00		818.29	22,229.48	28,672.14
Problems of lasting peace	250.00					250.00
Publication costs of revised "Who's Who in Latin America"	834.87				802.50	32.37
Publication fund	9,568.01			370.69	193.10	9,745.60
Purchase of books	5,100.00	2,500.00			319.35	7,280.65
Rosenberg Foundation, for Dr. C. C. Scott Shelves	863.78	5,000.00		162.50		863.78
Whiting, Mrs. Giles		10,000.00		260.00		5,162.50
Wilbur, Ray Lyman, collection of social problems	164.77	216.72				10,260.00
<i>Department of Physical Education and Athletics:</i>						
Anonymous		3,000.00			63.99	317.50
General	11.00	10.00				3,000.00
Men	14.81	17.50				21.00
Women	37.65	94.00				32.31
Women's Athletic Association, for repair of hockey field	201.11	-84.63			116.48	131.65
Total schools and departments	\$ 928,256.14	\$ 754,152.40	\$1,077,686.99	\$20,364.05	\$564,657.53	\$2,215,802.05
OTHER:						
Anonymous, unclassified gift		\$ 2,450.00				\$ 2,450.00
Curry, Mrs. David A.		10,000.00		\$ 357.40		10,357.40
Fitch, Mary Ann Erwin, memorial	\$ 327.50	243.00	\$ -570.50			
Gifts transferred to unappropriated endowment income		14,016.17	-14,141.17	125.00		
Henley, Lloyd, Jr., memorial		75.00				75.00
Lucie, Aunt, loan fund	25.00					25.00
Miscellaneous current funds, unclassified		10.00				10.00
Unrestricted gifts		63,821.66	-45,139.98		\$ 17,181.68	1,500.00
Total other	\$ 352.50	\$ 90,615.83	\$ -59,851.65	\$ 482.40	\$ 17,181.68	\$ 14,417.40
Total expendable gifts	\$1,059,671.17	\$1,011,946.72	\$1,015,310.35	\$21,228.93	\$739,447.80	\$2,368,709.37

APPENDIX II

SCHOOL AND DEPARTMENTAL REPORTS

SCHOOL OF BIOLOGICAL SCIENCES

During the year the staff consisted of Professors Emeriti L. Abrams, L. L. Burlingame, D. H. Campbell, W. K. Fisher, H. Heath, M. I. McCracken, G. J. Peirce, G. C. Price, H. B. Torrey; Professors D. M. Whitaker (Dean), L. R. Blinks (Director of the Hopkins Marine Station), G. P. DuShane, G. F. Ferris, A. C. Giese, G. S. Myers, C. B. van Niel, W. H. Rich, T. J. Skogsberg, G. M. Smith, V. C. Twitty, I. L. Wiggins (Director of the Natural History Museum); Associate Professors R. L. Bolin, J. F. Oliphant; Assistant Professors R. C. Rollins, A. M. Srb; Acting Assistant Professors R. C. Bacigalupi, J. P. Heath, B. T. Scheer; Instructor J. S. Hensill; Acting Instructors E. F. Cook, J. W. Tilden; Lecturers W. A. Cannon, C. M. Child, L. M. Klauber, J. W. Moffett, A. R. Moore, O. E. Sette, A. C. Taft; Secretary K. Merola.

The most noticeable changes over the preceding year resulted from great increase in numbers of students at all levels. Class rooms and laboratories were filled for long hours as never before, and time and strength of the faculty were strained. Students were able and eager, however, and of unusually high quality. The faculty, which is as eminent and able as it has ever been in biology at Stanford, carried the increased burden cheerfully and well, without any let up in our constant effort to improve the quality and effectiveness of our teaching. Research support and activity were at high levels, and graduate students and visiting investigators from all parts of the world made use of our facilities in unprecedented numbers. It was a good and successful year.

Courses of instruction given by members of the faculty are recorded in the Stanford Register, and the publications of the faculty are listed elsewhere in the President's Report. Other activities of individual regular staff members and their associates are briefly reviewed below, but a number of staff members are covered in whole or in part in the reports of the Directors of the Hopkins Marine Station and the Natural History Museum that follow.

Professor DuShane devoted a large part of his energies with outstanding success to reorganizing and improving the large elementary course in General Biology which is taught by a number of staff members. He also continued an investigation of regeneration in the nervous system of vertebrate embryos with the assistance of Mrs. Pao-ying Niu who is studying some aspects of this problem as a candidate for a Master's Degree. He gave the opening address at the New York Academy of Sciences Conference on "The Biology of Normal and Atypical Cell Growth" in November, 1946. His paper on "The Origin and Development of the Melanophores" will be published in the Annals of the Academy. During the year he spoke before the Stanford Faculty Research Club, the Alumni Conferences at Los Angeles and at Stanford, and gave one of the Lectures of the Tuesday Evening Series.

Professor Giese was awarded a Guggenheim Fellowship for a study of the fundamental nature of the effects of ultraviolet radiation on protoplasm. In the course of this study he visited and worked at a number of Institutions during the first half of 1947. At the California Institute of Technology, where he was Visiting Professor of Biology, he studied the effects of ultraviolet radiation on albumin in the laboratory of Professor Linus Pauling, and at Corona del Mar using Urechis eggs he investigated the sensitization to heat that ultraviolet radiation induces in protoplasm. He studied surface reactions of proteins in the laboratory of Dr. Henry Ball at Northwestern Medical School, and prepared a review on the effects of radiation on cell division while visiting the Grerar Library in Chicago. Dr. Giese also attended meetings and visited a number of eastern laboratories engaged in work on radiation before returning to Stanford to continue his studies. In Dr. Giese's laboratory Mr. John Hensill continued his studies on the physiology of circulation in grapsoid crabs, and under the direction of a committee of which Dr. Giese was chairman Mr. Francis Haxo completed his Ph. D. thesis on the carotinoid pigments of Neurospora.

Professor Smith (see also Hopkins Marine Station) continued isolating sexual strains of the one-celled alga Chlamydomonas, and made a start toward determining the cultural conditions under which species of this alga develop sexual substances. During the summer, Dr. Smith participated in the Bikini Scientific Resurvey, an expedition to Bikini atoll in the Marshall Islands conducted by the United States Navy to investigate the effects of the atomic bombs a year after the explosions. He studied the condition of the marine algae and of their reproductive capacity. During the year Dr. Smith served on the editorial boards of Biological Abstracts and the Botanical Review, and edited a book on the algae now in the press of the Chronica Botanica Co. He also served on the Council of the Botanical Society of America and as the first president of the newly organized Phycological Society of the Americas.

Professor Twitty continued investigation of the factors which activate and direct the morphogenetic movements of ameoboid embryonic tissue cells, and with the collaboration of W. H. Oliver, Jr., made cinephotomicrographic records of their migratory behavior under experimental conditions in vitro. In his laboratory Mr. M. C. Niu, H. E. Lehman, and Miss Annette Eggers attacked various aspects of the problem of pigmentary development in vertebrate embryos; Mr. Douglas Humm conducted an investigation of the amino acid content of the blood during larval growth of salamanders; Mr. Reed Flickinger, Jr., measured the respiration of embryonic neural tissue by use of the Cartesian diver method; and Mr. F. T. Algard studied the development of experimentally produced haploid amphibian embryos. During the year Professor Twitty served as a member of the Panel on Morphogenesis of the Growth Committee of the National Research Council. In November he participated in a symposium on normal and neoplastic pigmentary behavior sponsored by the New York Academy of Sciences.

Professor Whitaker participated in the Bikini Scientific Resurvey of the United States Navy during the summer months, together with Professors Blinks, Myers, and Smith of the School of Biological Sciences. The object of the expedition was to determine accurately the effects of the atomic bombs a year later, as well as to contribute to the general scientific knowledge of the Marshall Islands.

Dr. Whitaker determined the breeding condition of many species of marine invertebrates, including seven species of sea urchins, and also studied their embryological development. The reproductive capacity and early embryology of the marine organisms is of special interest because these phenomena are most sensitive to radiations of the types resulting from the atomic bombs. Dr. Whitaker served as Chairman of the Advisory Board of the Bikini Resurvey. He also served as a member of the Panel on Cell Physiology of the Growth Committee of the National Research Council, the Committee on Human Reproduction of the National Research Council, and on the Executive Committee of the Inter Society Committee on Science Foundation Legislation of the American Association for the Advancement of Science, appointed to promote the establishment by the Federal Government of a National Science Foundation. Dr. Whitaker continued to serve on the editorial boards of the Biological Bulletin, The Journal of Experimental Zoology, The Journal of Morphology, Growth, Acta Zoologica, Survey of Progress in Biology, and became editor for Zoology for Freeman and Co., publishers.

Associate Professor Oliphant continued studies with Mrs. R. H. McLanathan on ways of obtaining sterile cysts of histolytica, the organism causing amoebic dysentery. A comparative study was also made of the growth of Endamoeba in a variety of media. Under Dr. Oliphant's direction Mr. C. S. Richards continued a study of protozoan parasites in snails, discovering and describing four new species. Experiments were also performed to study physiological aspects of the host parasite relationship.

Assistant Professor Rollins (see also Natural History Museum) continued an extensive research program on the genetics and breeding behavior of the guayule rubber plant and related species of Parthenium. His research was expanded as a result of support by the United States Navy through a contract with the Stanford Research Institute. Work on the project was carried out under Dr. Rollins' direction by Dr. D. G. Catcheside, Lecturer in Botany and Fellow of Trinity College, Cambridge, and by Dr. D. U. Gerstel of the University of California and by Miss M. E. Riner. Mr. James Goesser and Miss Janice Isenberg have also begun graduate theses on the genetics of guayule. Reports to the Stanford Research Institute from this group include, (1) "Studies of F₁ Hybrids produced from crosses between guayule and Parthenium stramonium," (2) "Contributions to the Cytology of Guayule," (3) "Genetics of self-incompatibility," (4) "Genetics of apomixis in Guayule," (5) "Semi-lethal dwarfism in Parthenium Hybrids," (6) "Studies of size relationships in a Polyploid series of Guayule."

Instructor Hensill and Acting Instructor Cook continued work on their Ph. D. theses under the direction of Professors Giese and Ferris respectively. Mr. Cook received the Ph. D. degree at the end of the summer quarter.

Under the direction of Professor Giese and Assistant Professor Rollins, the School Seminar had a very successful year. Attendance was good and a long list of distinguished speakers provoked discussion of many subjects, as may be seen from the list of speakers and titles that follows: S. C. Brooks, University of California, "Cell Permeability in the Light of Evidence from Studies with Radioactive Salts"; E. L. Duggan, Stanford University,

"Certain Aspects of Denaturation"; R. R. Newell, Stanford Medical School, "The A-Bomb Tests at Bikini"; V. E. Hall, Stanford University, "The Toxicity of Stabilizers of Human Plasma Albumen"; G. F. Ferris, Stanford University, "It is the Discrepancy that Teaches"; J. Field II, Stanford University, "Intergration of Energy-Yielding Processes in the Cell"; T. Bullock, University of California at Los Angeles, "Evolution of the Synapse"; R. M. Eakin, University of California, "Determination and Regulation of Polarity in the Amphibian Retina"; P. Maheshwari, University of Dacca, India, "Botanical Research in India"; W. M. Hiesey, Carnegie Institution, "Dynamics of Climatic Races of Achillea"; H. B. Fell, Cambridge, England, "Organized Growth and Tissue Culture"; D. F. Jones, Connecticut Agricultural Experiment Station, "Growth Changes Associated with Chromosome Rearrangements"; H. Kirby, University of California, "The trichomonad flagellates"; C. H. Danforth, Stanford Medical School, "Homologies in the Feet of Extra-toed Cats"; I. L. Wiggins, Stanford University, "Preliminary Report on a Biological Field Trip in Baja California"; W. F. Talbot, Stanford Research Institute, "The Stanford Research Institute"; R. D. Owen, University of Wisconsin, "Some Recent Work in Immunogenetics"; H. Holter, Copenhagen, Denmark, "The use of Cartesian diver in the Study of respiration and metabolism"; D. G. Catcheside, Stanford Research Institute, "Some Recent Work on Position Effect on Genes"; A. Szent-Györgyi, University of Budapest, Hungary, "The Chemical Structure and Function of Muscle"; Luis Rene Rivas, Colegio de la Salle, Havana, Cuba, "Origin of the West Indian Inland Fish Fauna"; S. Elsdon, School of Biochemistry, Cambridge, England, "The Microbiological Aspects of Digestion in the Herbivores"; C. B. van Niel, Hopkins Marine Station, Stanford University, "On the Metabolism of Non-sulphur Purple Bacteria"; B. Volcani, Rehovoth, Palestine, "The Micro-Organisms of the Dead Sea"; W. E. Berg, University of California, Berkeley, "Individual Differences in Respiratory Gas Exchange After Exercise"; V. C. Twitty, Stanford University, "Studies on the Ameboid Movements of Embryonic Tissue Cells."

DOUGLAS M. WHITAKER

Dean

HOPKINS MARINE STATION

Resident faculty members were: L. R. Blinks, C. B. van Niel, T. Skogsberg, Professors; R. L. Bolin, Associate Professor; F. T. Haxo, Research Associate. During the summer quarter the staff was augmented by G. M. Smith, Professor; B. T. Scheer (University of Southern California), Acting Assistant Professor; and A. K. Moore (University of Oregon), Lecturer. Timothy Hopkins Lecturers were A. Szent-Györgyi (Budapest) and T. A. Stephenson (Aberystwyth). D. Benedict and N. Riser were teaching assistants in the summer quarter.

The academic year was one of the most successful in the history of the Station. Over one hundred students and investigators were present at the peak, this being reached in the summer during the participation of the University of California, which offered courses for six weeks, in addition to our own courses, most of which were crowded to capacity. All teaching laboratories were shared on alternate days by different classes during this time. There were 40 students from Berkeley, 31 from Stanford, and about 20 from other institutions. Drs. Pitelka, Bullock and Smith taught the students from Berkeley, and occupied three offices, plus two large laboratories. Despite the crowding, the experiment in collaboration was a good success, and it may be anticipated that its continuation can be worked out satisfactorily.

Professor van Niel returned from his sabbatical leave in January, and Professor Bolin departed on his at the end of the summer. Both held Guggenheim Fellowships.

Dr. Blinks continued work on electrical properties of Bryopsis, and on the photochemical properties of pigments from red algae. The aqueous solution of phycoerythrin shows brilliant fluorescence, which is quenched by oxidized dyes. The latter are sometimes slowly reduced in the light, and there is a slight shift of oxidation-reduction potential. Conditions favoring this are being further investigated. With Dr. Haxo, a monochromator of good purity and intensity was constructed, for tracing the absorption and action spectra of various algae. Published curves for green algae were confirmed, and those for brown algae greatly refined. In the latter case the accessory pigment fucoxanthin is additive to chlorophyll in its action spectrum. But the phycoerythrin of red algae seems to be the chief active pigment, despite the presence of chlorophyll in good quantity. The action spectrum closely coincides with the absorption spectrum of phycoerythrin, with maxima in the green region instead of the blue and red. The light absorbed by chlorophyll seems to be ineffective in the production of oxygen (which is determined by reduction at a platinum electrode).

During the last five weeks of the summer quarter, Dr. Blinks was on leave of absence, to participate in the Bikini Scientific Resurvey, a joint army-navy expedition to investigate the effects of the atom bomb explosion after one year's lapse of time. He was concerned with the physiological alterations of marine algae.

Mr. Haxo submitted his doctoral dissertation on the pigments of Neurospora.

Mrs. M. Dretzer made measurements of the photosynthetic and respiratory rates of several calcareous and non-calcareous red algae (chiefly Bossea and Prionitis). There appears to be a higher

photosynthetic rate in the calcareous forms, which may account for their desposition of calcium carbonate.

Mr. H. J. R. Stevenson completed research on the electrical resistance and capacity of the protoplasm of Mallicystis cells. Both alternating and direct current recordings were made, particular attention being paid to deviations from static capacity, both with frequency and with current density. A remarkable breakdown and recovery of potential was found in larger inward (anodal) currents; this is the first instance of "stimulation" by such currents found in plant cells. The results will appear in an M.A. thesis.

Mr. J. Anderson, working at the campus under Dr. Blinks' direction, investigated the effects of direct current flow upon the amoeboid motion of myxomycete plasmodia. The direction of the effect was found to be influenced by acidity of the medium.

Professor Bolin pursued his work on a world-wide revision of the fishes of the deep-sea family Myctophidae. In addition, studies were continued on local marine fishes. The following students worked under Dr. Bolin's direction:

Mr. H. L. Arora completed an investigation of the breeding behavior, gross embryology and early larval stages of the toad-fish, Porichthys notatus.

Mr. H. G. Orcutt initiated a study of the life history of Platichthys stellatus, a commercially important flat-fish.

Mr. R. R. Prasad continued his work on life history of the goby, Clevelandia ios. That portion dealing with the embryology and larval stages is completed.

Mr. F. H. Tarp pursued his work on a revision of the viviparous surf-perches (family Embiotocidae) of the north Pacific.

Mr. V. Vrat continued his investigations on the life history and variability of the stickle-back, Gasterosteus aculeatus.

Mr. J. C. Briggs completed an investigation of the effects of Stevens Creek Dam (Santa Clara County) upon the stream bottom fauna, comparing the productivity of the stream above and below the dam, and evaluating the effect of the dam in stabilizing temperature and water flow.

Miss S. Wheatland undertook a study of the feeding techniques employed by various starfishes.

Professor van Niel, working in collaboration with Dr. H. A. Barker of the University of California, has obtained experimental evidence that organic substrates function exclusively as hydrogen donors in the photosynthetic carbon dioxide reduction by purple bacteria. The experiments also permitted computation of the "carbon dioxide turn-over" in many cases, without ambiguity due to CO₂ production from the substrate. This was because radio-active carbon dioxide was employed. This opens the way for determination of the quantum yield in bacterial photosyntheses. Experiments with labelled carbon compounds also have supplied the necessary link between oxidative (dark) and photosynthetic metabolism of the purple bacteria. They furnish proof that in the dark, oxygen replaces carbon dioxide as the ultimate hydrogen acceptor; they also show that carbon dioxide can be replaced by any one of the 4-carbon dicarboxylic acids, succinic, fumaric, malic and oxalo-acetic acids, in the dark oxidation of certain substrates notably fatty acids. The 4-carbon acids are effective in such small amounts that they may be deemed catalytic.

These results, obtained in collaboration with Dr. S. K. Elsdon,

Dr. B. Volcani, and Mr. W. Vishniac, suggest a metabolic cycle analogous to that discovered by Krebs for acetic acid oxidation in mammalian tissues. However, in purple bacteria a different cycle must operate, since neither ketoglutaric, iso-citric, nor citric acids can replace carbon dioxide or the dicarboxylic acids mentioned. These results are of importance in understanding the mechanism of photosynthesis.

Mr. Vishniac also worked on the pure culture and properties of the alga Hematococcus pluvialis and the bacterium Thiobacillus thioparus. The latter may provide a clue to the interpretation of an anomaly of strictly chemo-autotrophic bacteria: the alleged inability of such organisms to metabolize organic compounds.

Dr. Eysden, Scientific Officer of the Agricultural Research Council of Great Britain, was in residence for six months, during which time he studied a number of strains of marine and fresh-water photosynthetic green sulfur bacteria. These were isolated for a more complete study of the morphology, taxonomy and physiology of this group than has hitherto been attempted. During this isolation, anaerobic agar-decomposing organisms appeared and were carried into enrichment cultures, and specific isolation was attempted. In collaboration with Dr. van Niel, a study of the oxidative mechanisms of Rhodospirillum rubrum was undertaken.

Dr. Volcani, Staff Member of the Daniel Sieff Research Institute, Palestine, was in residence several months, under tenure of a Fellowship of the Weizmann Institute of Science Foundation. He worked on the bio-synthesis of blue pigment produced by Pseudomonas indigofera. Although the organism can grow in various media, the pigment is produced only in certain peptones, and in the presence of sucrose. The amino-acid requirements were therefore studied. A greenish color develops with asparagine-sucrose, and a strong blue color when casein hydrolysate is added. A rust-red pigment is produced from tryptophane, and from indole plus serine, but not from either of the latter alone. This indicates that tryptophane may be first synthesized by the organism, and then converted to pigment.

Professor Skogsberg continued work on the trematodes of bony fishes of the tide pools; the studies centered on Podocotyle, of the family Allocreadiidae. The marine members of this family are little known on the Pacific Coast; and indeed, little is known of the life histories of marine Trematodes in general. The following students worked under Professor Skogsberg's direction:

Miss E. Boone compared the embryology of three Polyclad species. Two Leptoplanidae laid eggs which developed into swimming larvae in the laboratory. More limited material of a Cotylean was studied. Light was required, and laboratory temperatures were satisfactory, the larvae developing until the food of the egg is exhausted. Growth then stops and the larvae shrink and die; provision of adequate food is the next major problem. The peak of egg laying occurs from April to June. Species of Acotylae develop into a Goette's larva, while Cotylea produce Müller's type. One Cotylean is present in Monterey Bay in sufficient numbers for embryological study.

Mr. W. G. Fields completed study of the adult morphology of the squid Loligo opalescens, and continued investigations on the embryology and natural history of this form.

Mr. D. M. Wootton carried out preliminary work on the embryology, gametogenesis and digestion of Polyorchis montereyensis, a hydrozoan medusa; this work is supplemented by observations of the hydroid stages of the medusa Phialidium gregarium.

Mr. F. Telsonicher continued study of the morphology and physiology of the digestive tract of Lamellibranchs, as represented by Macoma. Ecological observations were also made. This clam ingests large quantities of sand and silt, along with organic food materials. Feeding, sorting and digestion of food was compared with these processes in mussels and oysters, which are better known.

Professor Smith supervised work by Mrs. Kretzer during the spring quarter on periodicity of reproduction in Ulva, and development of zygotes, which were carried to plants visible to the naked eye. This is necessary to complete proof of the alternation of generations in this alga.

Mr. F. Silva began study of the algae on the coast south of the Monterey Peninsula, under guidance of Professor Smith.

The California Division of Fish and Game continued to occupy space in the Agassiz Laboratory. Mr. J. B. Phillips continued research on commercially important marine fishes, with emphasis on sardines and rockfish. He collaborated with Dr. F. Felin of the U. S. Fish and Wildlife Service at Stanford, on a paper summarizing the results of six seasons of sardine age readings in British Columbia, Washington, Oregon and California. Mr. K. Cox, Jr., assisted Mr. Phillips in the local fisheries work. During the summer Mr. J. G. Carlisle continued study on the spawning and early development of the red abalone.

Dr. and Mrs. R. Turner of Stanford were in residence during the summer, working on problems of neuro-anatomy and physiology in worms and other invertebrates. Some of this work was done in association with Dr. T. Bullock of the University of California (Los Angeles) and Professor A. R. Moore, of the University of Oregon. Dr. Bullock was especially interested in synaptic events in the giant axons of squid.

Dr. G. Q. Voight and Mr. T. P. Condron working on the U. S. Navy "SOFAR" project (underwater sound fixing and ranging) utilized oceanographic data taken earlier by Professor Skogsberg's hydrographic Survey of Monterey Bay. Temperature and salinity data were important to determine the depth of minimum sound velocity, which is used to locate underwater microphones off shore. This project is devised for air-sea rescue procedure, and will monitor the air lane from San Francisco to Hawaii. This is an example of how data taken for totally different, and strictly scientific reasons, may suddenly find a new and practical use.

With increased travel from Europe, we are being favored with more visitors from foreign institutions. In addition to Drs. Elsdon and Volcani, mentioned above, Dr. H. Holter of Copenhagen, Dr. O. Lindberg and Dr. Fries of Stockholm paid brief visits. Dr. T. Stephenson, of Aberystwyth, began a detailed study of local ecology, as part of a tour to various American Stations. Several of these visitors, and Br. G. Clarke, of Harvard gave seminar addresses.

LAWRENCE ROGERS BLINKS
Director

NATURAL HISTORY MUSEUM

The teaching and curatorial staff of the Natural History Museum consisted of I. L. Wiggins, G. F. Ferris, G. S. Myers, and W. H. Rich, Professors; R. C. Rollins, Assistant Professor; R. C. Bacigalupi, Acting Assistant Professor; J. W. Tilden, Acting Instructor; E. I. Applegate, Acting Curator of the Dudley Herbarium; L. M. Klauber, J. W. Moffett, and O. E. Sette, Lecturers; R. S. Ferris, Assistant curator of the Dudley Herbarium; M. H. Storey, Assistant Curator of zoological collections; J. Boehlke, J. F. Gustafson, J. Haig, J. P. Hiltz, and E. M. Lissant, museum assistants; B. S. Jespersen and S. L. Miller, secretary-librarians.

GENERAL

Increases in the enrollment of advanced and graduate students at the Natural History Museum taxed the physical plant to a marked degree. All offices and cubicles were in full use during the autumn, winter, and spring quarters. Fluorescent lights needed for laboratory work were installed in the single classroom at the beginning of the spring quarter. Adequate classrooms are still unavailable in the building. This lack necessitates holding classes in other parts of the campus, inconveniently removed from the teaching collections.

An expedition to Baja California, under the direction of Professor Wiggins, and made up of Dr. A. M. Vollmer, Dr. H. M. Hill, Dr. T. H. Work, and Mr. T. Work, spent two and one-half months in the field during the autumn quarter. Specimens of plants, birds, fishes, amphibians, reptiles, small mammals, and a few invertebrates were obtained. The expedition was financed by the members of the party.

A new Chevrolet Suburban Carryall has been ordered. The purchase of the vehicle, to be used for Museum field work, was made possible through the generosity of an anonymous donor.

DUDLEY HERBARIUM

Academic.—Eight graduate students were engaged in work leading toward advanced degrees during the year, two of whom, M. L. Everly and Mother B. M. Ferrens, completed the requirements for the degree of Master of Arts. Courses in taxonomic botany were offered during the winter, spring, and summer quarters.

Research.—Professor Emeritus L. Abrams continued work on Volume III of the Illustrated Flora of the Pacific States, nearly eighty percent of which is in galley proof. Manuscript for the remainder is almost ready for the printer.

Professor I. L. Wiggins completed manuscript for the Flora of the Sonoran Desert through the Hydrophyllaceae. As junior author with Professor Emeritus D. H. Campbell, he participated in the publication of a paper on the "Origins of the Flora of California."

Assistant Professor R. C. Rollins continued his investigations on guayule, under a contract between the Stanford Research Institute and the U. S. Navy, and on the Cruciferae. He prepared a paper dealing with a portion of the latter family for inclusion in a

memorial volume to be published by Harvard University. Other papers are in the course of preparation.

Dr. R. Bacigalupi prepared manuscript on the family Saxifragaceae for Dr. R. J. Davis' Flora of Idaho.

Mrs. R. S. Ferris aided in the preparation of manuscript for the Illustrated Flora of the Pacific States and for the Flora of the Sonoran Desert.

Miss. M. L. Everly completed her study of the genus Perityle, and the major portion of her Master's thesis is now in press as a number of the Contributions from the Dudley Herbarium.

Mother B. M. L. Ferris completed a thesis on the "Taxonomy of the genus Fritillaria in North America" in August.

Curatorial.—3,279 sheets were mounted and inserted into the herbarium, bringing the total to 314,191 sheets.

Accessions for the year numbered 6,751 sheets, of which 4,639 were obtained through exchange, 427 were gifts, 1,158 were collected by staff members, and 527 were sent in for identification.

Eight metal-covered herbarium cases are under construction. When completed they will reduce the congestion in parts of the herbarium.

Several loans of material were sent out to other institutions.

ENTOMOLOGICAL COLLECTIONS

Professor G. F. Ferris continued his work on the "Atlas of the Scale Insects of North America," and saw several papers dealing with insect morphology through the press.

Mr. E. F. Cook completed his work for the Ph. D. degree, his dissertation being on the "Comparative Morphology of the Heads of Fly Larvae."

Mr. V. Walker completed his work for the degree of Master of Arts, his thesis dealing with the ecological significance of the use of DDT as an insecticide.

Several other graduate students continued work toward the Master of Arts and the Doctor of Philosophy degrees.

Dr. V. P. Rao, of Bangalore, India, spent about three months at Stanford working on scale insects with Professor Ferris.

Mr. R. Mamet, of Rose Hill, Mauritius, presented an important collection of scale insects from the island of Mauritius.

ZOOLOGICAL COLLECTIONS

Academic.—Professor G. S. Myers and W. H. Rich supervised the research work of between twelve and eighteen graduate students during various quarters of the year. These students were interested in the fields of ichthyology, fisheries, mammalogy, herpetology, and ornithology.

Course work in these fields was given by Professors Myers and Rich both jointly and under their individual guidance. Mr. Tilden gave a course in the classification of birds during the summer quarter.

Research.—Professor Myers continued his research on the ichthyology and herpetology of Brazil. He also worked in cooperation with Mr. A. Fernandez on a book dealing with the fishes of

Venezuela. Several projects of lesser magnitude also claimed his attention and resulted in papers published or prepared for publication. During July and August of the summer quarter Professor Myers was a member of the Bikini Scientific Resurvey group. While on Bikini he gave particular attention to the reptilian fauna of the atolls, but investigated also certain marine organisms.

Professor W. H. Rich continued his interest in the problems of the salmon fisheries in Oregon, Washington, and Alaska, and spent the summer investigating certain aspects of these problems under the auspices of the Fish and Wildlife Service.

Curatorial.—The addition of Mrs. B. S. Jespersen to the staff as secretary-librarian made possible considerable reorganization in the Jordan Library of Ichthyology and in the indexing of separates. The extensive collection of reprints accumulated by J. O. Snyder was combined with the general library of reprints, duplicates eliminated, and index cards made and filed. Ichthyological reprints which will be bound up soon will add 67 volumes to the Jordan Library of Ichthyology. Reprints on birds, mammals, herpetology, and invertebrate organisms are filed alphabetically. The entire book collection has been arranged according to the system used in the main library and is housed in locked cases. Over 30 students made full research use of the library during the autumn, winter, and spring quarters. Many needed texts and valuable gift volumes were added during the year.

Publication of the Stanford Ichthyological Bulletin was continued with the issuance of "The Evolution of the Marine Cottidae of California, with a Discussion of the Genus as a Systematic Category" by Professor R. L. Bolin. This paper comprised number 3 of volume 3. Ten new exchanges with other institutions have been arranged in the course of the year, using the Bulletin as our exchange publication.

Miss J. Haig served as curatorial assistant during the winter and spring quarters, devoting most of her time to the herpetological collections. Mr. James Boehlke held the same post in the summer quarter and worked almost entirely on the fish collections. J. Savage contributed volunteer work on the herpetological collections during the spring quarter, and Mr. W. V. Mayer and Mr. W. C. George reorganized the mammal and bird collections, respectively. Many reidentifications were made, and much cataloguing done during the progress of this volunteer work.

The inability of dealers to supply proper glass containers hampered the curatorial work and made necessary the use of makeshift jars.

Many new acquisitions were unpacked and prepared for insertion into the collections. About 2,290 numbers of specimens (and series of specimens) were catalogued and placed in the collections. They were distributed about as follows: 390 amphibians, 95 birds, 990 fishes, 500 mammals, and 315 reptiles.

A collection of Peruvian birds was unpacked, labeled and arranged for critical study. The zoological collections were combined and filed in accordance with the A. O. U. check list system of numbering. A collection of birds, mammals, fishes, reptiles, amphibians and a few invertebrates collected in Baja California by the expedition under the leadership of Professor Wiggins was

partially determined and some of the specimens, including all of the birds, entered in the main collections.

Cooperation with other institutions and investigators.—

Loans of varying sizes were sent out to nearly a score of institutions and individual investigators. Visiting zoologists who made use of the collections for varying periods of time while on the Stanford campus came from many parts of the world, including Cuba, India, Java, New Caledonia, and Russia, as well as from several institutions along the Atlantic seaboard, the middle west and the Pacific coast.

Organizations.—The Natural History Club held meetings monthly during the autumn, winter, and spring quarters and organized three field trips, one each to Moss Beach, Death Valley, and Kirkwood Lake near Kit Carson Pass. The Fischverein, a group of professional ichthyologists and fisheries men held monthly meetings, with an attendance of from 25 to 45.

Scientific meetings.—The December meetings of the Western Society of Naturalists, held in Whittier, California, were attended by Professor and Mrs. Ferris, and by Miss Storey. Professor Ferris was vice-president and Miss Storey a member of the Executive Committee. Professor Myers, as vice-president of the Western Division of the American Society of Ichthyologists and Herpetologists, and Mr. J. Savage attended the summer meetings of the American Association for the Advancement of Science in San Diego.

IRA LOREN WIGGINS
Director

GRADUATE SCHOOL OF BUSINESS

With the close of the University's fiscal year, August 31, 1947, the Graduate School of Business completed its twenty-second year of service to the University and to the community. During the year the School experienced an unusually heavy program of work and by far the largest registration it had ever known. In fact, the total enrollment of 497 students for 1946-47 compares with the largest pre-war registration of 226 students for 1938-39, and a total registration of 256 students for 1945-46. Of this total registration of 497 students, approximately 93% were attending under the provisions of the G.I. Bill of Rights and the average age of the students in the School approximated thirty years. A total of 164 M.B.A. degrees was awarded at the June commencement.

The resident faculty for the year consisted of Jacob Hugh Jackson, Professor and Dean; Herbert Edward Dougall, David Ernest Faville, Paul Eugene Holden, Theodore John Kreps, Harry John Rathbun, William Alfred Spurr, Edward Kellogg Strong, Jr., and John Philip Troxell, Professors; Barrett Frederick McFadon and John Metts Willits, Associate Professors; Jesse Knight Allen, Arthur Kroeger, Carlton Anker Pederson, and Frank K. Shallenberger, Acting Associate Professors; Edwin Truman Coman, Jr., Assistant Professor and Director of the Business Library; Clausin Dennis Hadley, Acting Assistant Professor; and Mrs. Rae Olsen Wirtz, Instructor. Dr. George William Dowrie, Professor of Finance, Emeritus, in the Graduate School of Business, taught half time throughout the academic year, and Professor Charles Langdon White of the School of Humanities, Associate Professor Oliver Erasmus Byrd of the School of Physical Education, Associate Professor Lelant T. Chapin of the Department of Speech and Drama, and Assistant Professor Henry P. Goode of the School of Engineering gave regular instruction in the School.

Special Lecturers included Mr. Carl Elliott McDowell, who gave the course in Ocean Shipping during the autumn quarter, Mr. Ralph Smith Olpin, who gave the course in Auditing during the autumn quarter, Mr. Sam T. Dickey, who gave the course in Purchasing during the spring quarter, and Dr. Charles J. Marsh, who taught one of the sections in Statistics during the spring quarter. Dr. Robert I. Mehr, Associate Professor of Insurance, Butler University, was again visiting associate professor during the summer of 1947 and gave two courses in the field of insurance. This group of experienced businessmen and scholars not only introduced new subject matter and points of view into our School curriculum, but also contributed definitely to the scholarship and good fellowship of our year's program.

There were several major changes in faculty personnel for the year under review. Professor Herbert Edward Dougall, of Northwestern University, became Professor of Finance in place of Professor Dowrie, who became Professor of Finance, Emeritus, as of the close of the 1945-46 academic year. Professor William Alfred Spurr, of the University of Chicago, became Professor of Statistics, to fill the vacancy caused by the death of Professor Norman John Silberling in the autumn of 1942. Dr. John Philip Troxell, industrial relations leader of Baltimore and New York City, became

Professor of Industrial Relations and Director of the Division of Industrial Relations, in place of Professor Paul Eliel, who resigned to enter private consulting practice in San Francisco. Dr. Jesse Knight Allen, Assistant Professor of Finance, who had been absent on leave for several years on government service, returned to the School as Acting Associate Professor of Finance. Other appointments included Dr. John Metts Willits, Associate Professor of Business Psychology, Mr. Arthur Kroeger, Acting Associate Professor of Marketing, Dr. Carlton Anker Pederson, Acting Associate Professor of Business Management, Mr. Frank K. Shallenberger, Acting Associate Professor of Industrial Management, and Dr. Clausin Dennis Hadley, Acting Assistant Professor of Statistics. These new members of the faculty have made a constructive contribution to our program of work throughout the past year and have made possible the greatly expanded program resulting from the large number of G.I. students admitted to the School.

Miss Carol Remele continued to serve as executive secretary of the School. Mrs. Garnita Eriksen, Miss Dorothy Harrod, Miss Edith Kawabe, and Mrs. Gladys Williams have served as secretaries and office assistants. In the Business Library Mrs. Betty Akins, Mrs. Katherine M. Greisinger, Mrs. Patricia Nicholson, and Miss Helen Probeck have been assistant librarians.

In addition to the resident faculty and staff named above, the following prominent executives of the Pacific Coast continued throughout the year to serve as consulting members of the faculty; Paul Stuart Armstrong (general manager, California Fruit Growers Exchange), James Byers Black (president, Pacific Gas and Electric Company), S. Waldo Coleman (president, North American Investment Corporation), Harry D. Collier (chairman of the board, Standard Oil Company of California), Paul Lewis Davies (president, Food Machinery Corporation, San Jose), Ralph Kenneth Davies (deputy petroleum administrator, Department of the Interior, Washington, D. C.), Don Earl Gilman (executive vice president, Western Oil and Gas Association, Los Angeles), Alexander R. Heron (vice president, Crown Zellerbach Corporation), Richard Hilliard (president, Associated Industries, Inc.), George Roscoe Keast (partner, Lybrand, Ross Bros. & Montgomery), Roger Dearborn Lapham (mayor, City of San Francisco), Jacob Bertha Levison (retired; formerly chairman of the board, Fireman's Fund Insurance Company), Joy Lichtenstein (retired; formerly vice president, Hartford Accident and Indemnity Company), Edward Crossley Lipman (vice president and managing director, The Emporium), Frederick Lockwood Lipman (chairman of the board, Wells Fargo Bank & Union Trust Co.), Atholl McBean (chairman of the board, Gladding, McBean & Co.), Ernest Boyd MacNaughton (president, First National Bank of Portland, Oregon), William Adam Magee (president, Thomas Magee & Sons), Theodore S. Petersen (vice president and director, Standard Oil Company of California), Neil Petree (president, Barker Bros., Los Angeles), Samuel Pond (formerly vice president and treasurer, Marine Chemicals Company, Ltd.), Arthur B. Poole (vice president, treasurer, and director, American President Lines, Ltd.), Paul Ainsley Sinsheimer (counselor and dealer in investments), Dean Witter (partner, Dean Witter & Co.), and Arthur Howland Young (formerly vice president, United States Steel Corporation), consulting professors;

William Herbert Carr, (treasurer, California Packing Corporation), Floyd Lester McElroy (vice president and director, Loomis-Sayles & Company), and Clifford Ernest Schink (vice president and treasurer, California and Hawaiian Sugar Refining Corporation, Ltd.), associate consulting professors; and Douglas Raymond Fuller (second vice president, Northern Trust Company, Chicago), and Benjamin Franklin Warren (chief industrial engineer, Crown Zellerbach Corporation), assistant consulting professors.

These consulting professors have continued to serve the School generously and wholeheartedly by lecturing before our classes, by continuing to make available to the School much valuable and confidential material, and by giving of their wide and varied experience to faculty and students alike. Their advice on School policy has been sought on several occasions and has always been found most helpful. The School has continued to be most fortunate to have available the counsel and friendship of these outstanding leaders of Pacific Coast business.

During the year the School offered regular courses leading to the M.B.A. and Ph.D. degrees in business. Every effort was made to review and modernize both our individual courses and our entire program of work to meet the new problems and the needs of business in the postwar period. The appearance of many businessmen before our classes was most helpful in accomplishing this goal.

The total enrollment of 497 regular students in the School included 298 first year students, 193 second year students, and 6 advanced students working towards the Ph.D. degree. This enrollment was more than twice the enrollment of any pre-war year, and approximately twice the enrollment for the academic year 1945-46.

At commencement on June 15, 1947, 164 Master of Business Administration degrees were awarded. Of these 164 degrees, 18 were conferred as of the close of the 1946 summer quarter, 12 at the close of the autumn quarter, 22 at the close of the winter quarter, and 112 at the close of the spring quarter. These degrees were awarded to 160 men and 4 women, making a total of 865 men and 22 women who have received M.B.A. degrees since the establishment of the School in the autumn of 1925. No Ph.D. degrees were awarded during the year under review.

The classes in shorthand and typewriting for undergraduate students continued to be offered, and some 259 different students, representing a total of 379 separate enrollments registered for the courses. While the large majority of these registrations were upper division students, a few lower division students also took the work. These courses in shorthand and typewriting are service courses offered for undergraduate students of the University, and, although given under the auspices of the Graduate School of Business, do not constitute a regular part of the curriculum of the School.

Because of the greatly increased enrollment in the Graduate School of Business during the year under review, the Business Library faced an unusually difficult problem, namely, that of fitting more than four hundred and seventy-five students into the one hundred and eighty seats in the Library. However,

through the cooperation of the faculty and some change in the teaching methods in use in the School, the Library continued to serve effectively the needs of the faculty and the student body.

The Business Libraries now contain in excess of 12,000 volumes and 110,000 pamphlets, government publications, and annual and quarterly corporation reports. During 1946-47 the additions included 721 volumes (257 by gift and 464 through purchase) and more than 4600 pamphlets and corporation reports. Six hundred twenty-four financial, trade, labor, and business publications are currently received, in addition to eight business, financial, and labor services.

The Division of Industrial Relations again resumed full-time activity under the leadership of Dr. John P. Troxell, the new Director. These activities included the restoration of the flow of materials into the Division's Library, a flow which had inevitably greatly diminished during the war-imposed inactivity of the Division. It also included a renewal of the Division's services of information to cooperating organizations, and also the initiation of a research program affecting several companies in the Bay area. A special survey on employee ideas and attitudes, based upon the Fireman's Fund Insurance Company and the Metropolitan Life Insurance Company, was carried on. The inauguration of a "Stanford Round Table of Industrial Relations" has also been accomplished, by which a group of some forty-five industrial relations executives of leading companies of Northern California are brought together bi-monthly with the Division's Director for the purpose of exchanging views and information on current developments, advising upon research plans, hearing and criticizing interim reports on research projects, and the like. During the year the Division of Industrial Relations has not only become again a very active and integral part of the School's program, but also has succeeded in bringing both the leaders of industry and prominent labor leaders into contact with the Division's work and activities.

The Business School Alumni groups, both in Los Angeles and in San Francisco, continued to hold regular meetings throughout the year under review. In addition, the alumni of the School organized during the year a general Business School Alumni Association, of which the Los Angeles and San Francisco chapters became integral parts. All alumni and former students wherever located are eligible for membership in the Business School Alumni Association, and will be urged to become affiliated with it. This is a definite step forward in the alumni relations of the School, which it is believed will be most beneficial both to the School and to all those who have formerly been students registered in it.

On Saturday evening, May 24, approximately 300 alumni, students, faculty, and friends of the School gathered in the dining room of the Stanford Village for the School's annual dinner. The main address of the evening was made by Mr. Alexander R. Heron, vice president in charge of industrial relations of the Crown Zellerbach Corporation, and consulting professor of industrial relations in the Graduate School of Business. Short talks were also made by representatives of the first and second

year classes of the School and by David P. Smith (M.B.A. 1937), president of the Business School Alumni Association. Greetings were brought by the President of the University.

The Business School Loan Fund, which was established in 1932 by a contribution of \$200 from the students themselves, had a balance of \$13,986.33 as of August 31, 1946. During the year under review gift additions to the fund amounted to \$490.00, and interest accretions added \$34.65 more. The balance in the fund as of August 31, 1947, accordingly was \$14,510.98. As of the close of the fiscal year, there were fourteen loans outstanding, having a principal sum of \$3,964.84 and leaving a balance in excess of \$10,500.00 available for future loans. Although this fund has not had heavy demands made upon it during the past two or three years during the G.I. program, it continues to be one of the greatest assets which the School has in rendering service to its students.

The endowment funds for the Business Library were further increased during the year by gifts of \$1,000 from Mr. S. Waldo Coleman and \$2500 from Mr. George M. Keast. These additional gifts bring the total endowment of the Business Library to \$34,725 as of August 31, 1947.

During the year under review \$1,743.50 was added to the principal of the George W. Dowrie Scholarship in Finance, bringing the total principal of that scholarship to \$12,313.50 as of the close of the fiscal year. The sum of \$1000 was also added to the Frederick Bronson Cooley Memorial Scholarship making the principal of that scholarship \$4,000.00 as of August 31, 1947. Current scholarship funds for 1946-47 included two \$500 scholarships from the Douglas Aircraft Company, Inc., a \$750 fellowship from the Eastman Kodak Company, and a \$1,000 fellowship from the Standard Oil Company of California. Current money gifts included \$150 for the Business Library and \$50 for the Division of Industrial Relations, which sums represented honorarium checks returned by speakers at the Stanford Business Conference, and miscellaneous gifts of \$866. The details of these gifts are included in the annual report of the President of the University.

The Stanford Business Conference, which had been omitted during the past war years, was held again this year, during the week of July 14-18 inclusive. More than two hundred business executives were registered throughout the Conference, and in addition the members of the faculty, the Business School students registered during the summer quarter, and others about the University also attended. An unusually strong program was presented to the more than four hundred people in attendance. Dr. Sumner H. Slichter, Lamont University professor in Harvard University, was the keynote speaker of the Conference. The Stanford Business Conference has been, and will continue to be, one of the most constructive services rendered the business communities of the Pacific Coast by our Graduate School of Business.

Several of the volumes comprising the Stanford Business Series have continued to sell well during the year. In the case of "Top Management Organization and Control" approximately 3,500

copies were sold, and in the case of Professor Strong's "Vocational Interests of Men and Women" approximately 425 copies were sold. There was also a very considerable demand for the Research Monograph, "Apprenticeship Practice in the United States" by Eugene I. Danaher, this comprising No. 3 of the Business Research Series.

Volume 16 of the Business School Alumni Bulletin was issued in November, March, and July of the year under review. Each issue consisted of approximately sixteen pages of material in mimeograph form, and between 1000 and 1200 copies were mailed out to alumni, former students, faculty and friends of the School. As in previous years, each issue of the Bulletin contained a leading article, a brief message from the Dean, news of alumni meetings, faculty and alumni notes, and various matters of interest to our alumni and former students. The Bulletin is also a means of keeping friends of the School informed of current activities and interesting developments.

During the academic year under review the faculty of the School continued to take an active part in the affairs of the University community and of business on the Pacific Coast. The publications of the faculty are reported separately, while their more general activities are reviewed in the following paragraphs:

Dr. J. Knight Allen continued during the first part of the academic year to direct the Pacific Coast office of the U. S. Maritime Commission's Renegotiation Board. He also served as an advisor to the California Commissioner of Corporations in connection with the regulation of the small loan business. During the month of August he gave a course on economic problems in the Pacific Northwest School of Banking in Seattle and conducted a round table on "International Economic Problems" before a group of 100 bankers in conjunction with the same school. During the latter part of the year under review he has served as a consultant to the Stanford Research Institute in its study of the financial condition of aircraft manufacturers, conducted as a part of a research program sponsored by the Air Coordinating Committee of the President of the United States. During the year he also spoke before Group II of the California Bankers' Association and before a number of business and fraternal associations in the Bay area.

During the year Assistant Professor Edwin T. Coman, Jr., completed the manuscript for a book, "Sources of Business Information", now in process of publication by Prentice Hall, Inc. He served as a member of the Library Advisory Committee of the Committee on Economic Development, and on the Professional Activities Committee of the Special Libraries Association. He was chairman of the Constitutional Revision Committee of the California Library Association and addressed the Association on the revision of its constitution. He was also chairman of the Constitutional Revision Committee, San Francisco Bay Region Chapter, Special Libraries Association, and was a member of the Executive Board of the Stanford Libraries Staff Association. He participated in a symposium on library service to business at the annual meeting of the California Library Association, and served as moderator for a discussion on staff associations at a meeting of the University,

College, and Research Library section of the California Library Association. During the year he placed number three in a nation-wide competition for the position of librarian of the Los Angeles Public Library.

Professor Herbert E. Dougall completed the revision of "Corporate Financial Policy", of which he is co-author, and served as consulting editor of business publications for two important publishing houses. He also continued his research in the field of internal financial administration of business organization. With Professor Allen he organized and conducted the Banking and Finance section of the Stanford Business Conference, and during the year spoke before a number of business and community groups.

Professor David E. Faville served during the year as chairman of the University Committee on Publications, as chairman of the University Committee on Research, as a member of the University Radio Committee, as a director of the Stanford Book Store, and as a member of the Stanford Fund Committee on Special Gifts, Trusts, and Bequests. He participated in the University course on Marriage and the Family. He served as editor of the Alumni Bulletin of the Graduate School of Business, and as chairman of the Scholarship Committee of the School. He finished out his term as a director of the American Marketing Association in which capacity he attended the annual winter meeting of the association at Pittsburgh and participated in a panel discussion. He served on the National Awards Committee of the American Marketing Association, on the Tobe-Coburn Award Committee for O'Connor Moffatt and Co., on the Education Committee of the San Francisco Sales Managers' Association, on the Appraisal Committee for the Western Conference of the National Federation of Sales Executives, and as a member of the Palo Alto Board of Public Safety. During the year he addressed the Fifteenth Annual Stanford Alumni Conference, the Peninsula Stanford Club, the Pacific Coast Conference of the American Marketing Association, the San Francisco Chapter of the American Marketing Association, the San Francisco Control of the Controllers Institute of America, the San Francisco Sales Managers' Association, the San Francisco General Life Insurance Agents' and Managers' Association, and the Northern California Young Men's Conference. He participated in an interrogation panel of the marketing section of the Northern California Management Conference and served as chairman of the distribution panels at the Stanford Business Conference. He published one article and one book review.

Dr. Clausin D. Hadley spoke during the year before the San Francisco Chapter of the American Statistical Association, the San Francisco Chapter of the American Marketing Association, and the Northern California Management Conference in San Francisco. He supervised market research projects, sponsored by the Crow Pharmacy and by Roos Bros., Palo Alto, and participated in various committee activities in the Graduate School of Business.

Professor Paul E. Holden continued to serve as a member of the University Committee on Admission and Advanced Standing, and also

on the committee of Who's Who in Latin America. He served as president for a second year of the San Francisco Chapter of the Society for the Advancement of Management and as a member of the Taylor Award Committee of that Society. He also served as a member of the General Management Committee, the Administrative Management Committee, the Honors and Awards Committee, and the Work Standardization Committee of the American Society of Mechanical Engineers. He was a member of the general committee and chairman of the top management section of the Northern California Management Conference. He also served on various committees of the Graduate School of Business, and as chairman of the top management panel of the Stanford Business Conference. He spoke during the year at the annual conference of the California Personnel Management Association and before the Sales Managers' Association of San Francisco.

During the year under review Dean Jackson continued to serve as president and a director of the Stanford Book Store, and as a trustee of the Pacific School of Religion and of Simpson College. He also continued as a member of the Committee on Research of the National Association of Cost Accountants, and as a member of the general committee which organized and conducted the third Northern California Management Conference. He was vice president of the Pacific Coast Economic Association. He served throughout the year as one of the twelve international trustees of Kiwanis and since July has also been a member of the Finance Committee and of the Executive Committee of the International organization. In November he was chosen by the policy holders of the Teachers Insurance and Annuity Association as a trustee of that association for a four year term, and he attended the three meetings of the Board of Trustees in New York City in November, February, and May. In June he was elected a trustee of the Foundation for Economic Education, Inc., Irvington-on-Hudson, New York. During 1946-47 he had the honor of being Dickinson Lecturer in Accounting at Harvard University, and delivered the Dickinson Lectures at that institution in April, 1947. In June he was elected president of the Stanford Chapter of the American Association of University Professors. During the year he spoke before more than forty convention and organization meetings. He was the keynote speaker at the Pacific Cost Conference in Los Angeles in November, was the speaker at the 25th anniversary meeting of the San Francisco Chapter of the National Association of Cost Accountants, addressed the Boston Chapter of the National Association of Cost Accountants, spoke at the District conventions of the Utah-Idaho District and of the California-Nevada District of Kiwanis International, was the official representative of Kiwanis International in presenting the charters to the new Kiwanis clubs in Honolulu, Maui, and Hilo in the Hawaiian Islands, and spoke before community and service club groups in more than a score of cities throughout the state of California. He completed the manuscript for the publication of his Dickinson Lectures in Accounting, which volume is being published through the Harvard University Press.

Professor Theodore J. Kreps was absent on leave during the winter quarter to serve as senior specialist in price economics in

the legislative reference service in the Library of Congress, during which time he worked with the Joint Committee on the Economic Report. He was the editor in chief and the contributor of three chapters in "Fascism in Action," printed by order of the House of Representatives in August, 1947. During the year he was Alfred Sloane Lecturer at the University of Southern California, speaking on the subject of Cartels. He spoke during the year before the Tuesday Evening Series at Stanford University, the Town Forum Series in Sacramento, the Teachers Institute at Salinas, the Palo Alto Forum, the California Business Education Association, the West Coast Student Conference at Asilomar, the Stanford Student Conference on International Relations, the 1947 National Conference on Social Work in San Francisco, the Kiwanis clubs of Palo Alto and Redwood City, and various other organizations.

Professor Barrett F. McFaddon served during the year as director in charge of publications of the San Francisco Chapter, National Association of Cost Accountants. He also served as a member of the panel of lower division advisors and of the committee on Latin American Studies of the University, and of the Scholarship and Library standing committees of the Graduate School of Business. He attended the Pacific Cost Conference of the National Association of Cost Accountants in Los Angeles, the Pacific Coast Economic Association Conference in Santa Barbara, the National Conference of the Society for the Advancement of Management in Los Angeles, and the Northern California Management Conference in San Francisco.

During the year under review Dr. Carlton A. Pederson served as president of the California Business Education Forum and as vice president of the Bay Section of the California Business Educators Association. During September, 1947 he was a panel member at the national convention of the National Association of Foremen held in Los Angeles; he spoke on the subject "A Practical Approach to Executive Development." He was elected secretary-treasurer of the newly formed Stanford Business School Alumni Association and has been especially active in the development of that organization.

Frank K. Shallenberger took up his work in the Graduate School of Business with the beginning of the winter quarter in January. He has continued to serve as consultant to the Zone Administrator of the War Assets Administration and has also served as "Viewer" for the Federal Works Agency in its program in locating and distributing supplies, surplus equipment and materials to California educational institutions. During the latter part of the year he has acted in a supervisory consulting capacity to the Stanford Research Institute in its study of the expansibility of the aircraft industry (the study being made for the U. S. Air Coordinating Committee). In addition to his regular teaching Mr. Shallenberger has also been working on the establishment of an industrial laboratory to be used in connection with our instruction in industrial engineering and production management.

Professor William A. Spurr has given his time primarily to teaching duties during his first year in the School, but has also conducted three statistical surveys of veterans at Stanford. The first of these was a cost of living study based on 300 questionnaires, the second a general survey of veterans in the Graduate

School of Business prepared for the Business School Alumni Bulletin, and the third was a comparison of 3000 veteran and non-veteran grades prepared for the University Director of Information. Professor Spurr attended the annual meeting of the Pacific Coast Economic Association in Santa Barbara, where he spoke on the topic "The Teaching of Statistics." He also spoke during the year before the San Francisco Chapter of the American Statistical Association, before the Palo Alto Consumers' Credit Association, and before the Palo Alto Kiwanis Club. He served as chairman of the committee on instruction in statistics of the University, as a member of the program committee of the San Francisco Chapter of the American Statistical Association, and as a member of the Industrial Location Committee of the California State Chamber of Commerce.

Professor Edward K. Strong, Jr. attended a private conference on the selection of sales personnel conducted by the Klein Institute of New York City in December and the meetings of the American Psychological Association in San Diego in June. During the year he revised the Womens' Vocational Interest blank, manual, and twenty-five occupational scales. He spoke before the Society of Industrial Engineers in Oakland, and before the 20-30 club in San Jose. A third printing of his volume "Vocational Interests of Men and Women" was made during the year.

In addition to reorganizing the work of the Division of Industrial Relations, Dr. John P. Troxell spoke during the year before the Northern California Management Conference in San Francisco, the community forum of Palo Alto, the Personnel Management Association of California, United States Naval Shipyard Conference on employee relations, the Chamber of Commerce of Palo Alto, and the San Jose Scottish Rite. In addition he participated in the Stanford Alumni Conferences in Los Angeles, Monterey, Seattle, Portland, and on the Stanford Campus. He has been made a member of the sub-committee for labor market research of the Social Science Research Council.

Dr. John M. Willits was appointed research associate of the Psychological Corporation, Market Research Division, and during the year supervised the work of Stanford students on three consumer surveys in Palo Alto and nearby towns. In March he spoke at the annual meeting of the Fire Underwriters Association of the Pacific in San Francisco, which address will be published in the Association's proceedings for 1947. He conducted the vocational guidance session on vocational opportunities in psychology as a part of the guidance program sponsored by the Kiwanis Club of Palo Alto for Palo Alto High School students, and has prepared for publication one article and two book reviews.

In concluding this review of the academic year 1946-47, it is perhaps proper to state that the School looks forward to 1947-48 to the largest enrollment in its history, even surpassing that for the year just completed. Under the circumstances our library and classroom facilities will be not only inadequate but unusually cramped, though the School will endeavor to continue an effective program of work stepped up to the tempo of a more-than-doubled student body. During the past year, notwithstanding the heavy

teaching loads and the unusually large class enrollments, there has been complete and wholehearted cooperation on the part of every member of the faculty and of the staff of the School. Because of this we are able to record 1946-47 as a year of progress and genuine accomplishment.

J. HUGH JACKSON
Professor of Accounting, and
Dean of the Graduate School of Business

SCHOOL OF EDUCATION

The School of Education in April 1947 completed its thirtieth year. The faculty consisted of: Dean and Professor of Education A. John Bartky; Professors Warren D. Allen,* John C. Almack, William Harold Cowley, Paul R. Hanna, Ernest R. Hilgard,* Lucien B. Kinney, I. James Quillen; Associate Professors Reginald Bell, Ernest Hunt,* Maud Merrill James,* Walter V. Kaulfers, Maul L. Knapp,* Quinn McNemar,* Dan Mendelowitz,* Lawrence Thomas, Donald Winbigler;* Assistant Professors Elwyn Bugge,* James E. Curtis,* Alfred H. Grommon;* Acting Instructor Joseph D. Blacow; Lecturers Clarence Argo (winter), Glenn O. Blough (summer), Jay D. Conner (summer), Anastasia Doyle (autumn, winter, spring), John F. Eckert (winter), Albert D. Graves (summer), Jessica M. Haskell (summer), Ivan H. Linder (autumn), Paul A. Rehms (summer), J. W. Williams (spring); Teaching Assistants Kenneth Brown (summer), John Buchanan (autumn, winter, spring), John Cowan (autumn, winter, spring, summer), Harold Drummond (autumn, winter, spring), Theo Finn (winter, spring, summer), B. F. Gillette (autumn, winter, spring, summer), Jean D. Grambs (autumn, winter, spring, summer), William Harless (spring), George Herrington (winter), Paul A. Jones (spring, summer), Will Kindwell (winter), Roderick Langston (summer), Paul F. Lawrence (winter, spring, summer), Carolyn Lewis (summer), James Marsh (winter, summer), William Melchoir (autumn, winter, spring), Joseph Murphy (summer), Edmund O'Reilly (spring), August Revel (summer), Marion Theobald (autumn).

The secretarial staff consisted of Masago Shibuya, Secretary to the Dean; Elizabeth Hurd, Credential Secretary; Emilie Brady, General Secretary; and Ruby Faris, Faculty Secretary.

In the autumn of 1946 the Division of Health and Hygiene, and the Division of Physiotherapy were added to the School of Education. Professor Byrd was appointed Executive Head of the Division of Health and Hygiene.

In June 1947 an alternative program of work leading to the Master of Arts degree in Education, with a supervisal internship and seminar substituted for the thesis, was approved by the Academic Council and put into effect.

One hundred and eighty-five degrees were granted to majors in Education. Of these 53 graduates received the degree of Bachelor of Arts, 109 the degree of Master of Arts, 21 the degree of Doctor of Education, and 2 the degree of Doctor of Philosophy in Education. Four also received the degree of Doctor of Philosophy with a minor in Education.

A number of students receiving degrees in Education completed the requirements for at least one of the California professional credentials as well, and many credentials were granted to students majoring in other departments of the University. A total of 64 completed the requirements for at least one of the California professional credentials as well, and many credentials were granted to students majoring in other departments of the University. A total of 64 completed the requirements for the general secondary credential, 2 for the junior college credential, and 31 qualified for administration and supervision credentials. Eleven students completed the program for the general elementary credential while qualifying for the degree of Bachelor of Arts. The program for the general elementary

credential begun in 1943 in cooperation with San Jose State College was continued with a steadily increasing enrolment.

During the summer quarter the program arrangement to permit students to register either for the full eight-week session, or for the first or the second four weeks only was continued. Twenty students registered for the first four weeks only, and eight for the last four weeks only, with 620 enrolling for the full eight week period.

Publication of the Alumni Newsletter was continued during each of the three regular quarters. Alumni groups throughout the State continued to hold meetings. Attendance was reported as highly satisfactory.

For the third consecutive year the Workshop in Guidance was offered during the first four weeks of the summer session. Co-Directors of the Workshop were Professors McDaniel and Bell of the School of Education staff, and Mrs. Jessica Haskell of the Long Beach Schools. The workshop provided an opportunity for individual and group study to enable members to work out definite problems or do extensive work in areas of special interest.

A laboratory in Audio-Visual Learning Aids was set up for the eight week period. Representative visual apparatus and materials were collected. The laboratory was designed to make it possible for the student to become familiar with the nature and use of materials in the field, and to study, from a practical point of view, the general principles and problems involved in the selection of audio-visual aids and resources from the viewpoint of both the administrator and the classroom teacher. Eight of the students who devoted full time to the study of audio-visual aids were recipients of special scholarship grants by Encyclopedia Britannica. The students selected were staff members of public school systems who had major responsibilities for administration of audio-visual aids. In conjunction with this during the four week period an institute on audio-visual aids was held August 12 to 19 under the direction of Mr. C. R. Crakes of the DeVry Corporation.

An Institute for Elementary Science Teachers was held during the third week of the summer term. Its purpose was to acquaint elementary school teachers and administrators with new techniques in the teaching of science at the elementary level. Mr. Glenn Blough, elementary science specialist for the U. S. Office of Education, and Mr. B. F. Gillette of the Staff were co-directors of the Institute.

The third institute offered by the School of Education during the summer was that on Public Relations in Education held July 21 to 26. Through a series of small conferences within the group attending the Institute special problems in public relations in their relation to education were discussed.

As part of the Institute on Public Relations, the Summer Conference on Public Relations in Education was scheduled during the last three days of the week of the Institute. All phases of the public relations program were discussed in general and sectional meetings. Over eight hundred persons were in attendance. Meeting on July 25 and 26 and holding some meetings jointly with the Conference was the annual conference of the California School Trustees Association.

The fourth in the series of Cubberley Lectures was delivered

July 25 as a portion of the Conference on Public Relations in Education by Mr. Waldo Leland, Vice President of the United States Commission on UNESCO, and President of the American Council of Learned Societies. His topic was "UNESCO and the Defenses of Peace." The Cubberley Lecture served also as the occasion to present the Ke-fauver Portrait to the University as a gift from staff, students, and alumni of the School. It will hang in the Library of the School of Education.

Professor Bartky served as Dean of the School of Education. He was a member of the Graduate Study Committee of the University and chairman of the Committee on Advanced Graduate Degrees of the School of Education.

A University Teacher Education Committee with Dean Bartky as chairman was set up in the autumn of 1946 by the President. The efforts of the Committee were directed toward raising the standards for the Stanford secondary teaching credential. It was agreed that the Stanford credential should continue to represent a standard of achievement much higher than the present State requirement. It was also agreed that the academic departments of the University should be given greater responsibility for control of standards and the education of secondary teachers.

A thorough survey of secondary education in California was conducted with the aid of graduate students in the School of Education. From the findings of this survey the Committee is placed in a position to draw definite conclusions relative the needs of secondary education in the State and to build a more functional teacher education program.

The School of Education was instructed to improve the administrative set up for the credential program by making it possible for other interested departments to enter more fully into the enterprise of training secondary school teachers. The School is ready to present a plan for increased cooperation between academic departments and the School of Education for consideration by the Committee during the autumn quarter.

Professor Bartky served as district chairman for the local State Department of Education Redistricting Commission. He conducted for the State of California a survey of the California Maritime Academy at Vallejo, and for three weeks was Educational Consultant with the United States Naval Academy at Annapolis. At the completion of his first year as Dean of the School of Education Professor Bartky had addressed almost two hundred groups throughout the Pacific Coast region.

Professor Almack served the School of Education with membership on the Credentials Committee and the Committee on Advanced Graduate Degrees. Outside the University he conducted the Sequoia Union High School Survey covering a report on the buildings, organization, financial aspects, personnel, curriculum, guidance, and evaluation of the district. He also supervised the Redwood City Elementary School District Survey covering organization and work of the Board of Education, finance and business, personnel, curriculum, and evaluation of the district.

Professor Bell served as chairman, Stanford University Audio-Visual Aids Committee; member, School of Education Master of Arts Committee; member, Advisory Committee on Elementary Education,

California Council on Teacher Education; member, Advisory Council, Presidio Hill School of San Francisco. Professor Bell served as co-director with Lucien Kinney of the California Council for the Improvement of Instruction Study on the use of current materials in specific high school subjects. As a result of the study a report was published by the Stanford University Press covering the work accomplished during the 18 months of the study. Professor Bell served as University representative to the Los Angeles Area Workshops on Audio-Visual Aids in Education sponsored by the State Department of Education. He addressed the following groups during the year: University of Oklahoma, Northern Branch of the California League of Nursing Education, Presidio Hill School; Faculty Lecture Series of the Stanford University School of Education, Central Valley Section of the California Elementary Administrators Association, Southern California Conference of the California Council on Improvement of Instruction, San Mateo County Teachers Institute, Northern California Workshop in Audio-Visual Aids, and the Lytton School Parent Teachers Association. Professor Bell attended the following conferences during the year: Northern California Conference for the Study of Elementary Education, California Council on Improvement of Instruction, and National Association for Nursery Education.

Professor Byrd served as member, Administrative Committee on Athletics for men; and consultant to Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association. He was elected fellow of the American Public Health Association. He addressed the San Mateo County Teachers Institute and the Hayward, California, Teachers Institute.

Professor Cowley held membership on: American Council on Education Student Personnel Committee, Western College Association Committee on Accreditation, Western College Association Committee on 1947 Program, Western College Association Committee on Nominations, Stanford University Public Exercises Committee, and School of Education Committee on Advanced Graduate Degrees. He served as consultant to President James B. Conant of Harvard University on his 1945 Sachs Lectures, Dr. Alvin C. Eurich on his Committee Report Five of the Truman Commission on Higher Education; Personnel Administration of the University of Redlands, and Chico State College Curriculum Committee. He addressed during the academic year: Utan Council on Higher Education, Chico State College student body, Chico State College faculty, Western College Association, American Association of Collegiate Registrars, Bay Region Conference of Professors of English, San Diego State College, San Francisco Round Table, Redwood City Exchange Club, Fresno State College Commencement, Claremont Colleges Convocation, Claremont Colleges Graduate School Conference.

Professor Curtis spoke at the Teachers Institute at Santa Rosa. He attended the State Convention of the California Physical Education Association and the convention of the National Association of Health and Physical Education. He served as a member of the School of Education Master of Arts Committee and Committee on Teaching Credentials.

Professor Grommon served as member of the School of Education Master of Arts Committee; member, Library Committee of the School of Education; chairman, Department of English Committee on Teacher Training; member Department of English Committee on American Literature; member, Stanford University Committee on Student Affairs; member

Executive Board of the California Association of Teachers of English; member, College English Association Committee to Work with Secondary Schools; member, National Council of Teachers of English Committee on Teacher Education. He attended the Supervisors Conference in Long Beach and addressed the Institute for Secondary Teachers of San Mateo County.

Professor Hanna's university assignments included: member, Committee on Special Gifts, Trusts and Bequests, Stanford Associates; member, Committee on University Libraries; member, Committee on Foreign Students; member, Committee on Latin American Studies; member, Committee on Pacific and Asiatic Studies; member, School of Education Committee on Administrative Credentials. Professor Hanna's non-university commitments included: chairman, editorial board, Building America; member, Educational Advisory Board of W. K. Kellogg Foundation; member, Board of Editors of World Book Encyclopedia; member, National Council for the Social Studies Curriculum committee; member, National Council of Geography Teachers Committee on Standards; member, American Council on Education Filmstrip Committee on Latin America; member, Editorial Board of Review of Educational Research; member, Citizenship Education Study of Detroit; member, National Education Association Association of Supervision and Curriculum Development. He also served as Expert Consultant to the Secretary of War, assigned to the Staff of General Lucien Clay in Germany. This appointment was to prepare a preliminary draft of Curriculum Reforms for the Schools of Germany. During January and February Professor Hanna served as Educational Consultant to the Panama Canal Zone Schools on the reorganization of their curriculum. He served as consultant also to Los Angeles County Schools, and Philadelphia Public Schools. Professor Hanna addressed the following: California Association of City and County School Superintendents; Los Angeles County Teachers Institute; Topeka City Schools Institute, Missouri Teachers Association; Kansas Teachers Association; National Council for Social Studies; Bay Area English Council; Gilroy Area Principals Association; Ten groups in the Panama Canal Zone; Five groups in Germany, Palo Alto Lions Club, Stanford University Tuesday Evening Series, Educational Faculty of U. C. L. A.; San Mateo Kiwanis Club; Palo Alto Rotary Club, and the San Lorenzo Kiwanis Club.

Professor Kaulfers during the past year served as: member, Stanford Institute of Latin American Studies; consultant, School of Oriental Languages at Presidio, Monterey; Associate Editor, *Italica*. He made during the Winter Quarter an extensive cross country speaking tour under the auspices of regional affiliates of the National Council of Teachers of English and the National Federation of Modern Language Teachers Association.

Professor Kinney served as: member, School of Education Committee on Teaching Credentials; member, School of Education Committee on Advanced Graduate Degrees; member, University Committee on Teacher Education; educational consultant, *Coronet* magazine; consultant, Cooperative Test Service; president, California Council on Teacher Education; vice president, California Mathematics Council; member, State of California Committee on Accreditation; co-director, California Council for the Improvement of Instruction. He was chairman of the National Council of Teachers of Mathematics at their annual meeting in Atlantic City.

Professor Luckett was Acting Director of Health Education for the past year. He served on the Committee on Public Health of the University and was the University Health Officer.

Professor McDaniel joined the staff of the School of Education at the beginning of the academic year, coming to the University from his position as Chief of the Bureau of Guidance and Occupational Information in the California State Department of Education. Professor McDaniel served as: chairman, University Vocational Guidance Committee member, School of Education Master of Arts Committee; member, Committee on non-teaching credentials; consultant, Fort Bragg School system; consultant, Palo Alto City Schools; consultant, Sequoia Union High School; speaker, Alberta Teachers Association; and speaker, California Youth Authority.

Professor Quillen served as secretary, School of Education Committee on Advanced Graduate Degrees; member, National Council for the Social Studies Executive Board; member, Committee on International Education and Cultural Relations of the American Council on Education; member, advisory committee for yearbook of National Society for the Study of Education; evaluator, University of Chicago Press; member, National Advisory Committee of Detroit Citizenship Education Study; consultant, Seattle Public Schools; consultant, Schools of Lakewood, Ohio; consultant, Schools of Houston, Texas; consultant, Schools of Tulare, California; and consultant, Catlin-Hillside Schools of Portland, Oregon. He attended the regional meeting in Denver called by the U. S. National Commission for UNESCO as representative for the University. Professor Quillen spoke extensively to educational and public groups. This included addresses to schools and groups in Detroit, Lakewood, Houston, Seattle, Portland, Salt Lake City, Oakland, and Los Angeles.

Professor Thomas served as: advisor, candidates for A. B. in Education and the General Elementary Credential; member, Lower Division Advisors; member, Committee on Admission and Advanced Standing in the University; member, Committee on Athletics for Men; Secretary, Stanford Athletic Council; member, Executive Board of the Stanford Faculty Club; faculty sponsor, Stanford Hot Jazz Society. He served as visiting professor for the second summer session at the University of California; member, Group Work and Recreation Committee of the Palo Alto Youth Coordinating Council, and Vice President, Palo Alto Council on American-Soviet Friendship. He attended the meetings of the Philosophy of Education Society in Philadelphia and the meetings of the American Association of School Administrators. Professor Thomas addressed the Education Faculty Lectures Series; Palo Alto Council of American Soviet Friendship; California Student Teachers Association, and Stanford Conference on International Relations.

A. JOHN BARTKY

Dean of the School

* Also the member of the faculty of another division of the University

SCHOOL OF ENGINEERING

The west has long dreamed of an indigenous industry of sufficient magnitude to balance its agricultural resources. The war advanced these hopes and brought to the west the beginning of a great new era of industrialization. A strong and independent industry must, however, develop its own intellectual sources of science and technology, for industrial activity that depends upon imported brains and second-hand ideas cannot hope to be more than a vassal that pays tribute to its overlords, and is permanently condemned to an inferior competitive position.

Our western universities, accordingly, have a responsibility to a growing industrial west. They can train the type of men required to exercise leadership in an expanding industry. They can be a source of ideas, and of inspiration that stimulates people to new accomplishments. They can serve as catalysts that speed the reaction by which the discoveries of pure science are turned to practical uses that advance industrial technology and create new industries.

The universities can, however, carry out their responsibilities only if they receive the moral and financial support necessary to achieve and maintain leadership in educational matters. In particular, if western industry and western industrialists are to serve their own enlightened and long-range interests effectively, they must cooperate with western universities and, wherever possible, strengthen them by financial and other assistance. Only in this way will it be possible to do the little bit extra that makes the difference between leadership and mediocrity.

Stanford's School of Engineering has, as a major objective, service to the west. It offers a broad undergraduate program in engineering that combines the fundamentals of the various fields of engineering with humanistic studies such as history, economics, public speaking, scientific writing, etc., in a manner designed to develop well-rounded citizens. Moreover, the Stanford undergraduate engineering curriculum possesses flexibility such that the individual student can adjust his program of study to serve a personal life plan, instead of being required to adjust his goals to agree with the curriculum, as is customary in engineering.

Stanford has also for many years provided an organized program of graduate instruction in engineering designed to give superior students something more than the minimum passable training. Graduate work of two types is available. First, a student can combine additional training in an engineering specialty with training in business lines to prepare himself to exercise leadership in business activities having an engineering basis. Alternatively, the student may choose to concentrate on the development of his technical knowledge in a chosen field of engineering, and thereby aim towards leadership in scientific and technological activities.

Stanford's offering in engineering are rounded out by a research program concerned with fundamental engineering science, and led by distinguished faculty men with national and international reputations. Participation in this research program is an essential and important

part of the training of those graduate students preparing for a technical and scientific career in engineering.

Stanford, as an independent university, has the flexibility essential to carrying out its special mission. As a university, Stanford provides its engineering students with the broadening opportunity, lacking in more specialized schools, of close association with other young people who are preparing for careers in other than scientific and technological fields.

Sponsored Research. Government sponsored research has become an important factor in the operations of the School of Engineering. During the past year research was carried on in the School of Engineering under fourteen government contracts, with such government agencies as the Office of Naval Research, Army Air Force (Wright Field), Army Air Force (Watson Laboratory), Army Signal Corps, National Bureau of Standards, and National Advisory Committee for Aeronautics. The annual rate of expenditure involved in this work now exceeds \$400,000 per year.

Most of these sponsored research activities represent an expansion of research activities that individual faculty members were previously conducting on a much smaller and on a less effective basis using university and private resources. The experience we have had in carrying out this work has been uniformly satisfactory. In particular, it has not been necessary to compromise on fundamental academic and scientific values. We therefore feel that the government agencies involved are to be congratulated on their support and administration of long-range basic work of this type.

This sponsorship of research under favorable conditions has greatly increased both the quality and quantity of faculty research output. Moreover, extensive student participation in the program has resulted in a similar improvement in the quality of graduate training that Stanford is now offering advanced students and has also made it possible to increase the number of students who are trained to the highest levels.

It is important to note that the sponsored research program has likewise improved the caliber of instruction, not only at graduate levels, but in the upper undergraduate levels as well. This is a result of the increased number of men of high caliber who are associated with the School of Engineering as a result of the research projects, and who make their contribution to the intellectual life and instruction of the School.

Transfer of Mining to School of Mineral Sciences. On January 1, 1947, the Department of Mining and Metallurgy of the School of Engineering became a part of the newly created School of Mineral Sciences. This consummated plans that had been under discussion for a number of years, and it is believed that the new School has a bright future ahead of it.

Registration Statistics and Degrees Granted. The past school year saw the completion of the post-war transition. The number of upper division students registered in Engineering rose from 55 in the Autumn Quarter 1945-1946 to 290 in the Autumn Quarter 1946-1947, while the number of graduate students similarly rose from 35 to 305. Although a moderate further increase is expected in the number of upper division students, plans for 1947-1948 contemplate limiting the graduate enrollment to slightly under 300.

The number of degrees awarded has risen similarly, as indicated by the following table:

	<u>1946-47</u>	<u>1945-46</u>
Bachelors	148 .	39
Masters	149	21
Engineers	11	4
Ph.D.	2	5

Dean's Activities. During the year Dr. Terman completed revision of the 3rd Edition of his book "Radio Engineering." The year also saw publication of Spanish translations of his books "Radio Engineering" and "Radio Engineer's Handbook." He served on the Executive Committee of the Administrative Council of the American Society for Engineering Education, was on the Research (Chairman), Handbook, Standards and Constitution and Laws Committees of the Institute of Radio Engineers, and the Research Committee of the American Institute of Electrical Engineers. The National Research Council appointed him Chairman of the RCA Fellowship Board that administers the NRC fellowships in electronics supported by the Radio Corporation of America. He attended conventions of the American Society for Engineering Education and of the Institute of Radio Engineers, and the annual meeting of the National Academy of Science. Dr. Terman presented an invited paper "Administrative Policies and Objectives of Research in Engineering Colleges" at the ASEE meeting, and was one of the three leaders of the session on communication in the symposium on "Engineering and Human Affairs" sponsored by Princeton University in connection with their Bicentennial Anniversary program. He also presented a talk "Electronic Warfare" before the Los Angeles Section of the Institute of Radio Engineers.

FREDERICK EDMONS TERMAN
Dean

CIVIL ENGINEERING

Personnel.--The active faculty of the department for the year 1946-47 consisted of the following: Eugene Lodewick Grant, Leon Benedict Reynolds, James Bertrand Wells, professors; John King Vennard, Harry Andrew Williams, Donovan Harold Young (on leave), associate professors; Clarkson Hill Oglesby, assistant professor; Dan Henry Reichel, acting assistant professor (summer quarter); Eugene Valentine Ward, lecturer; John Frederick Brahtz (summer quarter), Ernest Gunther Chilton, Lee Walter Crandall, George Ford (winter quarter), Joseph Bernard Franzini, Jr., Charles Sprague McCandless (autumn and spring quarters), Cedric William Richards, acting instructors; Mary Alice Sullivan (until June 1), Gladys Wells Crandall (June-July), Florine McIntosh (August), secretary; Otto George Warm, mechanic; Harry C. Rodgers, assistant mechanic (March-August).

Professors emeriti were John Charles Lounsbury Fish and Charles Moser.

Staff Activities.--Professor Grant's book, Statistical Quality Control, was published early in October, 1946. It is one of the Industrial Organization and Management Series of the McGraw-Hill Book Company. He served as vice-chairman of the Pacific Southwest Section of the American Society for Engineering Education through 1946, and as chairman for 1947. At the annual meeting of this organization at the California Institute of Technology on December 28, he presented a paper, "What Management and Economic Courses Should Be Included in All Engineering Education?" On February 20, 1947, he addressed the Highways and Transportation Section of the Commonwealth Club of California on "Section Report on Collier Committee Program." On March 22, he presented a paper on "Quality Control as Scientific Method" before the national convention of the Society for the Advancement of Management at Los Angeles. On June 14, he spoke before the sixth annual institute on government sponsored by the Sacramento Chapter of the California State Employees' Association on the topic "Effects of Price Level Changes on Economy Studies for Public Works." On July 14, he addressed the production round table session of the Stanford Business Conference on "A Modern Approach to Quality Control." During the year he served as chairman of the Committee on Instruction in Statistics, and as a member of the Registration Committee and of the Advisory Board. On March 31, following the resignation of Professor Reynolds, he was appointed executive head of the department.

Professor Oglesby planned and gave two new courses which, coupled with others already offered in the University, make up the Construction Option in Civil Engineering. These courses were "Construction Estimates and Costs" and "Construction Equipment and Methods." He taught the course in Advanced Surveying which in part replaces the pre-war Summer Surveying course and supervised the classes in Elementary Surveying. He served as a member of the Lower Division Advisory Panel of the School of Engineering. In January he conducted a special Geodetic Survey for the Loran Research Project. On December 17 and 18, 1946, he attended the meetings of the American Association of State Highway Officials in Los Angeles, and on March 4 he was speaker before the Scottish Rite Groups of San Jose on the subject of "Present-Day Transportation and its Problems." He was a member of the Highways and Transportation Section of the Commonwealth Club of California and

took part in its activities by serving as chairman of the committee which prepared the report on the "Collier Highway Program" and by appearing before the Section as speaker at the meetings of January 30 and February 27, 1947. He also presented the arguments "Favorable to the Collier Highway Program" when the Section Report was presented to the Commonwealth Club on March 13, 1947. This statement was published in the Transactions of the Commonwealth Club of California, Volume XLI, No. 3, pages 125 to 130. He served as a member of the Committee on Construction Equipment Education of the American Road Builders Association. In June, 1947, in collaboration with Dr. L. I. Hewes, Chief of the Western Headquarters of the Public Roads Administration, he began work on a textbook in Highway Engineering.

Professor Reynolds served as acting executive head of the department for the autumn and winter quarters when he resigned in order to devote all his time to teaching. He prepared an article on "Sewage Treatment in the Far West" which was published in the July issue of Western City to be available for delegates to the conventions of the American Water Works Association and the Federation of Sewage Works Association in San Francisco. He continued to serve as chairman of the Library Committee of the School of Engineering and on the Executive Committee of the School of Engineering until his resignation.

Professor Vennard devoted a major part of his time to improving the undergraduate hydraulic laboratory. He revised the basic course in Mechanics of Fluids (C.E. 106) and made plans to expand and increase the graduate courses in this field. He served on the University Lower Division Committee, on the Committee on Publications of the San Francisco Chapter of the American Society of Civil Engineers, and as chairman of the American Society of Civil Engineers research subcommittee on cavitation. The second edition of his Elementary Fluid Mechanics was published in June; his closing discussion for "A Symposium on Cavitation in Hydraulic Structures" was published in Proceedings of the American Society of Civil Engineers for February.

At the end of the year Mr. Ward retired as Lecturer in Architectural Engineering. The department appreciates his fine, unselfish service to students throughout his fifteen years at Stanford.

Professor Wells served on the Advisory Council of the Committee on Engineering, Foundations and Walls, for the Pacific Coast Building Officials Conference. He was chairman of the Board of Public Works of the City of Palo Alto and continued as a trustee of the Matadero Mosquito Abatement District. He was a member of the committee to study new hospital facilities for the City of Palo Alto. He was consulting engineer for Thomas and Whipple on various structural engineering projects, consultant for Weihe, Frick, and Kruse in connection with structural problems of the proposed new Law School building at the University, and consultant for Spencer and Ambrose on the design of structural features of proposed Crothers Hall dormitory. He inspected and supervised repairs to the Stanford stadium during the summer of 1947. He attended meetings of the San Francisco section of the American Society of Civil Engineers, the Structural Engineers' Association of Northern California, as well as subcommittee meetings of the Pacific Coast Building Officials Conference.

Professor Williams taught courses in Applied Mechanics and also gave a graduate course in Advanced Structural Design in conjunction with Professor Wells. In the research field, he conducted an analytical and experimental investigation of the bending of beams in the

plastic range under the sponsorship of the National Advisory Council for Aeronautics. He also conducted experimental investigations involving the plastic bending of cast iron bars and to determine the effects of moderately high temperatures on the stress condition of reinforced concrete columns. In the autumn he will continue with the above projects and, in addition, conduct an investigation of plastic bending and shear for the Army Air Force. His paper entitled "Pure Bending in the Plastic Range" will be published in the near future in the *Journal of Aeronautical Sciences*. During the year he continued to serve as faculty adviser to the Stanford Student Chapter of the American Society of Civil Engineers, as a member of the Soil Mechanics and Foundations Committee of the San Francisco Section of the American Society of Civil Engineers, the Northern California District Committee of the American Society for Testing Materials, and Research Committee 115 of the American Concrete Institute. In January, 1947, he was appointed a member of the Committee for Professional Guidance and the Committee for Structural Engineering Research for the Structural Engineers' Association of Northern California. He recently joined the Society for Experimental Stress Analysis and the American Society for Engineering Education. During the summer quarter he served as acting executive head of the department.

Professor Young was on sabbatical leave of absence during the year. His main project was the writing of a book on advanced dynamics in collaboration with Professor S. P. Timoshenko. In addition, some preliminary work was done for a paper on numerical methods of integration, and a new course on Dynamics of a Particle (C.E. 200) was developed and announced for the coming year.

Engineer's Degrees.---The students in this department obtaining the degree of Engineer, title of thesis, and the name of the major professor for the past year are as follows: Charles Sprague McCandless, "The Prefabrication of Small Structures," (Grant); Kirk Crawford McFarland, Jr., "Railroad Highway Grade Separation at Redwood City," (Oglesby); Philip Benjamin Sattler, "The Effect of Data Characteristics on the Choice of Method for Average Life Determinations of Physical Property Units," (Grant).

Master's Degrees.---Students obtaining Master's degrees were as follows: Vernon Charles Bengal, Robert Pearson Brodie, Edmund Shepard Cary, Fo Van Chang, James Cameron Eckels, Almeron Johnston Field, Verne Davis Freeman, Calvin Meyerhoffer Jones, Ferdinand Herman Karstedt, Samuel Givens Knowles, Kirk Crawford McFarland, Jr., Douglas Lawrence McLeod, M. Mangalabhanu, Herbert Albert Navis, Jack William Pierce, Fera Robert Preece, Wesley Delmer Risling, George Rudolph Thann, Jr., Oscar Albin Thompson, Fay Sue Tom, Robert Alfred Van Wye, Milton Begbie Walkup, Kenneth Ray Wyatt.

EUGENE L. GRANT
Executive Head
Civil Engineering Department

ELECTRICAL ENGINEERING

Personnel. The faculty during the academic year were Professors Joseph Snyder Carroll, Hugh Hildreth Skilling, Karl Spangenberg, and Frederick Emmons Terman (Dean of the School of Engineering); Acting Professor Leonard Franklin Fuller; Associate Professors Leland Hermon Brown, William George Hoover, and Ward B. Kindy; Acting Associate Professors William John Barclay, Henry Porter Blanchard, Victor Stuart Carson, Lester Marshall Field, Norman Moore, and Joseph Mayo Pettit; Assistant Professor Edward Leonard Ginton; Acting Assistant Professors Skipwith Wilmer Athey, Robert Arthur Helliwell, and Oswald Garrison Villard, Jr.; and Research Associate Laurence Albert Manning. Department Lecturers were Harold Farley Elliott, Fred Charles Hanker, William R. Hewlett, Josiah Pickard Jollyman, Charles Vincent Litton, David Packard, and Ezra Frederick Scattergood. Acting for the Summer Quarter were Professors Donald I. Cone, Ralph Judson Smith, and Instructor Frederick William Schott in addition to those who were on the faculty during the academic year. Research associates and assistants, teaching assistants, and others brought the total department staff to number over seventy-five persons.

Fellowships were awarded to the following graduate students: the Harris J. Ryan High-Voltage Research Fellowship to Tseng-Wu Liao, the Electric Heating Research Fellowship to Warren Schultheis, Westinghouse Fellowships to John Harvey Huth and Robert Lord Kirkwood, the Sylvania Fellowship to Vernon Byron Westburg, and the Hewlett-Packard Fellowship to Frank Wesley Clelland. The Nathaniel Richard Morgan Scholarship was awarded to Ellis Lincoln Roney. No award was made of the Harold Farley Elliott Scholarship or the John Stewart Low Scholarship.

General. The two factors of major importance to the Department during this year have been the large number of students and the expansion of the program of organized research. Instructional and research activities have supplemented each other in a mutually helpful manner.

For the first time, all applications from prospective students for admission in graduate standing were reviewed before admission was granted. To avoid overcrowding of the facilities of the department it was necessary to admit only about half of the qualified applicants. Even so, the year opened with 111 graduate students in electrical engineering, or about three times the usual registration before the war. Undergraduate enrollment was large, also, although not in such proportion.

The number of advanced students has been an advantage in many ways. It has been possible to offer a greater variety of instruction than ever before without having classes too small to be worth while. The students with many interests and varied backgrounds inspire each other, and all of the group gain from acquaintance with the other students. Because of the restricted admission of graduate students, the intellectual ability of those in the University has been exceptionally high. The maturity and seriousness of purpose, influenced also by the war, has been unusual. There has been no considerable crowding of courses or laboratories, for a number of new teaching faculty have been appointed and additional laboratory equipment has been obtained.

It is believed that the enrollment of graduate students for the coming year should be restricted to provide a somewhat smaller total group. In undergraduate work it is expected that the number of students will increase in the coming year, and that the maximum desirable number will soon be reached. It is intended that the size of undergraduate classes shall not be allowed to increase so greatly that personal acquaintance between student and teacher is lost.

Owing, largely, to the department's active training and research program during the war, it has been possible to carry on the post-war instruction program with experienced teachers. In this the University has been more fortunate than many colleges throughout the country. Another factor of great value has been the possibility of attracting young faculty men of the highest competency to Stanford to take part in the organized research program; these men join also in the instructional work. They increase the number of faculty in the teaching program, they increase the variety of advanced courses that may be offered, and they make it possible to maintain a high quality of faculty. This last point is of particular interest in comparison with colleges that have found it necessary to relax faculty standards because of the present great demand for teachers of electrical engineering.

Organized research has been carried on by the department for many years, under contract with government and industry, and during the year 1945-46 it was found both possible and desirable greatly to expand this program. Various contracts with the Office of Naval Research and with the Army Air Force and Signal Corps became effective in July, 1946, and have continued through 1946-47.

Such research is undertaken because it contributes to the education and experience of the students, and to the development and professional advancement of the faculty. Other advantages, such as increased attraction to prospective faculty and students, and prestige to the University, as well as the accomplishment of a public duty and the advancement of knowledge, naturally accrue.

Research has been undertaken largely in the field of electrical communication, including study of micro-wave tubes and circuitry, development of understanding of the new traveling-wave tube, study of the ionosphere including reflection and transmission of radio waves and reflection of radio signals from meteor trails, development of radio location by means of low-frequency Loran, and study of insulation with particular reference to high-voltage breakdown in transformers used in Radar and similar equipment.

The fundamental principle followed in planning organized research has been to build the program around the ability and interest of Stanford faculty men. It is not believed to be fruitful to contract to carry on research unless the key men for the project are present at Stanford and interested in the work. Certain excellent research men have been brought to the University in the expectation that research projects could be developed for them, and in all cases thoroughly satisfactory programs have been arranged.

From the point of view of organization, the research activity of the department has a largely autonomous structure. Administrative work of the research division and of the instructional division are independent except as both are under the general direction of the head of the department and the Dean of the School. Nevertheless, the same men constitute the teaching faculty and the research staff, and research

assistants are largely drawn from advanced and graduate students of the University. Thus the benefit of the research program is made available to faculty and students.

The research program is being continued and somewhat expanded for the year 1947-48. One of the smaller projects came to a natural end and was terminated. All others have been extended for another year or more, and two new projects are beginning in the summer or early autumn of 1947.

Both research and instruction have been greatly facilitated by increase in department equipment obtained as excess or surplus property from government agencies. A well-equipped machine shop is the outstanding gain. A large amount of valuable electronic apparatus has also been obtained. Care has been used to ask for and accept only equipment of real and immediate value, and University assets have been increased by property with an initial cost of hundreds of thousands of dollars.

Individual activities. Mr. Henry Porter Blanchard has, since January 1947, directed research sponsored by the Watson Laboratories of the Air Materiel Command on Low Frequency Loran. Investigations have included receiver and system band-width studies, and studies of system performance, receiver design, and low frequency radio propagation effects. The project was inaugurated in July 1946 and, recently, has been extended. During the year he also arranged for procurement of Surplus Property for the School of Engineering.

Dr. Leland H. Brown, in addition to teaching, assisted in the administrative work of the Department and served as acting head during the absence of Dr. Skilling. At the request of Dr. Furich he helped plan the relighting of the main reading room of the Library. He also laid out the fluorescent lighting system that is currently being installed in the reserved book room of the Library. Last September he visited the major lighting fixture manufacturers in the United States in making a survey of fluorescent lighting equipment for Safeway Stores Inc. He also attended the National Convention of the Illuminating Engineering Society in Quebec. In November he addressed regional conferences of the I.E.S. in Seattle, San Francisco and Los Angeles, summarizing the latest developments in school lighting. During spring vacation he went to New York City as a judge for the Sylvania Fixture Design Contest. On this trip he completed final details for the formation of a Utah Chapter of the Illuminating Engineering Society, gathered information on color measurement in Washington, D. C., and attended a Council meeting of the I.E.S. in Chicago. He was Vice President of the South Pacific Region of the Illuminating Engineering Society and a member of the following I.E.S. National Committees: School Lighting, Daylighting, Handbook Board of Review, Local Activities, Research, the Cannery Lighting Sub-Committee, and was an I.E.S. Representative on the Inter-Society Color Council. He was also chairman of the American Representatives on the International Committee on Illumination, Sub-Committee on Classification of Luminaires. Dr. Brown also obtained a renewal of the National Cannery Association Cannery Lighting Fellowship for 1947-48.

Dr. Joseph Snyder Carroll directed the activities of the Ryan High-Voltage Laboratory, supervised government research for the United States Army, and taught courses in electrical engineering. He was a member of the San Francisco sub-section committee of the American

Institute of Electrical Engineers.

Mr. Robert A. Helliwell continued in charge of the radio propagation research being done under contract with the Central Radio Propagation Laboratory of the National Bureau of Standards. He assisted in research experiments dealing with the detection of meteors by radio. He attended a joint meeting of the Institute of Radio Engineers and the International Scientific Radio Union in Washington, D. C., and participated in a series of conferences at the National Bureau of Standards on various phases of radio propagation. During the autumn quarter, he assisted with the teaching of the course in advanced radio; during the summer quarter, he gave a course, primarily for graduate students, on radio propagation.

Dr. William G. Hoover taught courses in circuits, design, transients, and transmission lines. His research activities were connected principally with the Signal Corps project on corona in solid insulation. In March he visited the laboratories of the Ohio Brass Company, the Westinghouse Corporation, the General Electric Company, and the Fort Monmouth, New Jersey, laboratory of the Signal Corps in connection with this project. He served as student counselor for the Stanford Branch of the American Institute of Electrical Engineers and, in the capacity as representative of the counselors of the Eighth District of the AIEE, he attended the AIEE Summer General Meeting in Montreal, Canada, in June. In August he attended the AIEE Pacific General Meeting in San Diego where he was elected Chairman of the Student Counselors for the Eighth District for the coming year.

Mr. Ward B. Kindy spent considerable time during the year on advisory and administrative work in connection with his membership on the University Lower Division Committee, in addition to class and laboratory teaching. He was appointed a member of the Technical Program Committee of the San Francisco section of the American Institute of Electrical Engineers.

Dr. Hugh Hildreth Skilling, as executive head, co-ordinated the various activities of the department. He served as a member of the following University committees: Vocational Guidance, Public Exercises, Patents, Graduate Study, Pacific and Asiatic Studies, Committee on Ticket Sales, Church Committee, and as advisor to the Committee on a Campus Radio System. For the American Institute of Electrical Engineers, he served on the national Committee on Education, the national Committee on Student Branches, and the San Francisco Committee on Student Relations. He addressed a general meeting of the San Francisco Section of the A.I.E.E. on the subject of the atomic bomb tests, following his return from Bikini as a scientific observer in August of 1946. He spoke on the same subject on the University Tuesday Evening series, combined with Sigma Xi, in a joint meeting, and at a later meeting showed motion pictures of the atomic bomb tests. He also spoke on this subject, and showed pictures, at the University of Santa Clara, the Palo Alto High School, the Palo Alto Kiwanis Club, and to thirteen other public audiences. During the year he rewrote "Fundamentals of Electric Waves" for a new edition to be published in the coming year.

Dr. Karl Spangenberg started and carried on a research project for the United States Government employing about ten half-time men. At the same time he completed work on an 800 page book on Vacuum Tubes scheduled for publication January 1, 1948. He made several trips East in connection with research, attended an Electron Tube Conference at Syracuse in June, and acted as general chairman for the West Coast Radio Engineers' Convention held at San Francisco in September.

Mr. Oswald Garrison Villard, Jr., supervised, under Dean Terman's direction, a research project on the development of light-weight radio transmitters for the Army Air Forces. During the year he participated, with Mr. Manning and Mr. Helliwell, in research work on the detection of meteors by radio which led to the presentation of a joint paper before a convention of the Institute of Radio Engineers in May, 1947. During the year Mr. Villard assisted in the supervision of thesis work and special studies. He published a number of papers on radio subjects, particularly relating to meteor detection.

HUGH HILDRETH SKILLING
Professor of Electrical Engineering

MECHANICAL ENGINEERING

Teaching Staff.--The teaching staff for the year 1946-47 consisted of Lydik Siegmundfeldt Jacobsen, Volney Cecil Finch, Boynton Morris Green, Alfred Salem Niles, Elliott Gray Reid, Stephen P. Timoshenko, professors; N. Minorsky, acting professor; Alexander Louis London, associate professor; Robert Stevenson Ayre, acting associate professor; Henry Peter Goode, Frank Fred Petersen, assistant professors; Donald L. Mason, Asa A. Robley, Albert A. Rowe, teaching specialists; Paul G. Bissiri, John A. Clawson, George Ford, Charles R. Garbett, William M. Kays, acting instructors; H. Julian Allen, Maxwell A. Henslet, Walter G. Vincenti, lecturers.

Professor James Norman Goodier from Cornell University was appointed Professor of Mechanical Engineering beginning the academic year 1947-48. Mr. Asa A. Robley resigned his position as Teaching Specialist and Mr. Marshall McDonald from Texas Technological College was appointed Mr. Robley's successor.

General.--During the Fall Quarter, the enrollment in the Department reached the number of 140 graduate students, 30 of which came from Moffett Field and took courses on a unit basis.

Staff Activities.--Professor Timoshenko continued to give his courses in Applied Mechanics. He attended the fall meeting of the American Society of Mechanical Engineers in New York. During the Spring and Summer Quarters, Professor Timoshenko made a tour of Europe for the purpose of receiving the award of the 6th James Watt International Medal in England. The citation accompanying the medal mentions Timoshenko's contribution to engineering science. It states that a great number of engineers of many nationalities have been privileged to be his personal students, but his influence on engineering education has made itself felt in much wider circles. "From his untiring pen have come a succession of about 20 books on the theory of elasticity, dynamics, stability, vibrations, structures, strength of materials, etc.; noted for the penetrating insight, high quality and creative ability, they have become standard engineering textbooks." "Timoshenko's books form a bridge between the often abstruse presentation by pure mathematicians of classical theory and the solution of practical problems encountered in design." "But apart from Timoshenko's services to engineering in the fields of academic work and authorship, he has achieved international fame and renown as a research worker and investigator." "He is the author of nearly 100 major papers covering a field of inquiry of an amazing scope." "In our reverent memory of James Watt, we think of the pioneer of the application of science to the development of the steam engine and to engineering in general." "In Stepan Prokofievitch Timoshenko, we recognize a scientist and technician of international repute who has so greatly assisted the progress of engineering by brilliant researches and investigations and by inspired teaching; one eminently worthy of the highest honour this Institution can bestow, the James Watt International Medal." In addition to his trip to England, Professor Timoshenko visited the Continent and spent some time in Düsseldorf, Göttingen, Karlsruhe, Darmstadt, Stuttgart and Munich. He then went to Switzerland, where he presented a paper at the Technische Hochschule in Zürich. He was honored by this institution by the award of the following degree: Docteur ès sciences Techniques, honoris causa, en reconnaissance de ses éminents travaux

de Méchanique théorique et appliquée.

Professor Finch published two textbooks in the National Press, Millbrea, Calif., namely, "Finch's Pump Handbook" and "Jet Propulsion."

Professor Green prepared a file containing the names and addresses of all engineering graduates of Stanford University. He acted as supervisor of the Gage Laboratory and as Honorary Chairman of the Stanford Chapter of the American Society of Mechanical Engineers. During the Christmas vacation he attended a meeting of the Pacific Southwest Section of the American Society for Engineering Education at Pasadena.

Professor Jacobsen supervised a Navy sponsored research program at Stanford on structural dynamics. Acted as technical adviser to the City of San Francisco's Department of Public Works in connection with the earthquake provisions in the new Building Code. He was made a member of the Panel on Seismology, Soil Mechanics and Volcanology of the Joint Research and Development Board in Washington, D.C., and chairman of the Advisory Committee on Engineering Seismology of the U.S. Coast and Geodetic Survey.

Professor Minorsky continued his studies on non-linear mechanics and gave a course in Differential Equations during the Spring Quarter.

Professor Niles attended the American Society for Engineering Education convention in Minneapolis in June where he gave a short talk on "An Introductory Course in Structural Theory." He arranged a research contract with Wright Field on the subject of thick-shell, thin-wing construction and plastic bending. Moreover he visited the following airplane factories and research centers: Boeing, Martin, Grumman, Republic, Vought, Douglas, Northrop, Lockheed, North American, Consolidated, Hughes, Wright Field and Langley Field, for the purpose of keeping abreast with the current trends as well as for the purpose of establishing contacts.

Professor Reid completed a study for the National Advisory Committee for Aeronautics of an unconventional type of ejector. During the Autumn Quarter he attended the N.A.C.A. Symposium on Ram-Jet Propulsion in Cleveland. He went on inspection tours arranged for a specially invited group of investigators at Wright Field, U.S.S. Boxer and at Muroc. During the summer he attended a meeting of the Institute of the Aeronautical Sciences at Los Angeles.

Professor London served as chairman of the Testing Techniques Committee, Heat Transfer Division, of the American Society of Mechanical Engineers. He secured two Naval Research Contracts on the projects: a) Determination of basic heat transfer and flow friction characteristics of heat exchanger surfaces, and b) Analysis and development aimed toward the production of a compact type of thermal insulation for high-temperature shipboard power plants. He completed a two-week trip in connection with the Naval Research projects, visiting the Office of Naval Research, U.S.N. Bureau of Ships, U.S.N. Bureau of Aeronautics, U.S.N. Engineering Experiment Station, the Air Preheater Corporation, the Harrison Radiator Division of General Motors, Chrysler Corp., and the Elliott Co. He improved the Mechanical Engineering Machinery Laboratory from the point of view of both graduate and undergraduate instruction, involving several new experimental set-ups. A large quantity of War Assets equipment has been obtained and new instrumentation was designed and purchased. He served as consultant to the Aero Physics Laboratory of North American Aviation Inc., in connection with heat transfer problems.

Professor Ayre directed the research in the Vibration Laboratory sponsored by the U.S. Navy. He gave a course in dynamics during the Summer Quarter.

Professor Goode took an active part in the Society of Industrial Engineers in the Bay Area, serving on its program committee. He acted as coordinator for the University in the Stanford University-Food Machinery Corporation Cooperative Training Program.

Professor Petersen prepared a paper on Fuel Additives for Replacement of Tetraethyl Lead. He served on the Professional Divisions Committee of the San Francisco Section of the American Society of Mechanical Engineers.

Mr. Mason served as a consultant for the Enterprise Engine and Foundry Company of South San Francisco. He has made drastic improvements in our foundry by acquiring sand handling and core making equipment from various sources. He served on the Advisory Committee for Foundry Apprentice Training of the American Foundrymen's Association.

Mr. Robley built 16 gas-fired furnaces for the Forge Shop and made numerous improvements in the shop equipment. He served as a member of the Educational Committee of the American Welding Society, San Francisco Chapter.

Mr. Rowe improved the machine shop facilities by partially rebuilding a number of surplus property machines acquired by the Department.

Messrs. Allen, Heaslet and Vincenti gave a very successful course in High Speed Flight scheduled during the evenings to accommodate part-time graduate students from Moffett Field.

Summer Quarter.—Twenty-five graduate students were enrolled in the department during the Summer Quarter. The following teaching staff was on duty: Professor Green, Acting Associate Professor Ayre, Assistant Professor Goode, Teaching Specialists Robley and Rowe, and Acting Instructors Clawson, Ford, Garbett and Kays.

Publications.—The publications of the staff have been submitted as separate items to appear under "Publications of the Faculty."

Engineer's degree.—No Engineer's degree was awarded.

Master of Arts degree.—Fifty-five degrees of Master of Arts were awarded.

Doctor of Philosophy.—The degree of Ph.D. was awarded to Ernest Gunther Chilton.

MILITARY SCIENCE AND TACTICS

Personnel.--At the beginning of the academic year, the following officers were on duty in the ROTC Unit:

Colonels: Francis A. Garrecht Jr., Field Artillery; John P. Randolph, Air Corps.

Lt Colonels: Merrill G. Hatch, Field Artillery; Martin G. Megica, Ordnance.

Majors: William R. Kugler, Quartermaster Corps.

Captains: Jack C. Eisenschmidt, Infantry; Clarence A. Strawn, Air Corps.

During the year, the following changes and additions were made:

Colonel Basil H. Perry, Field Artillery appointed Professor in November 1946 vice Colonel Garrecht relieved; Lt Colonel John E. Fitzgerald, Air Corps, appointed Associate Professor in July 1947 vice Colonel Randolph relieved; Lt Colonel Hatch transferred in July 1947; Captain Eisenschmidt transferred in November 1946; Captain Jacob A. Hutchison, Air Corps, assigned and appointed Assistant Professor in October 1946.

General.--A permanent program of Military Science and Tactics was inaugurated by the War Department in September 1946 to be known as the "Post War ROTC Program". Courses were offered in Field Artillery, Ordnance, Quartermaster and the Air Corps. As a result of War Department decision during the summer quarter, the Field Artillery Course was expanded to include all types of Artillery.

Students and Instructors.--The attitude of the students and their esprit has been remarkably high, in view of the expected post-war reaction to military affairs. Although the maximum enrollment was but 75 students, increased interest evidenced during the year indicates a large increase in students in the coming year. The unit as a whole was rated as "Excellent" as a result of the War Department's annual inspection.

Buildings and Grounds.--The classrooms assigned the unit are adequate. Office space is not entirely adequate for the tremendous amount of administrative work performed in connection with the unit itself, and also that necessarily performed in connection with the many officer-students undergoing instruction at the University under War Department programs. The former stable area, now largely utilized for storage space, for garaging vehicles, and for the recently completed small-arms range, is in need of extensive repairs. It is hoped that some alleviation of conditions may be made in the near future.

BASIL H. PERRY
Colonel Field Artillery
Professor of Military Science and Tactics

DEPARTMENT OF NAVAL SCIENCE AND TACTICS

The following officers were assigned to the staff of the NROTC Unit by the Navy Department for the year 1946-1947: Captain C.E. Crombe, jr. USN, Professor of Naval Science, Commander H. Mullins, jr. USN, Commander M.H. Buas, USN, Lt. Commander L.J. Tobin, USN, Lt. Commander R.J. Baxter, USN and Captain J.M. Rouse, USMC.

In addition, the following officers were assigned to the teaching staff of the Naval School of Administration: Commander R.L. Ramey, USN, Commander L.J. Findley, USN, Lt. Commander C.E. Anderson, USNR, and Lt. Commander J.L. Taylor, USNR.

The first year's activity of the NROTC Unit under the peace time system found an initial enrollment of 104 midshipmen, of which 73 were Regular midshipmen and 31 were Contract midshipmen. Regular students are those who are appointed midshipman, USNR, and who obligate themselves to attend all the requisite summer cruises and to serve at least 15 months on active duty, after commissioning as ensigns, U.S. Navy, or second lieutenant, USMC. They may also remain as career officers in their chosen branch of the service. In return, they receive retainer pay at the rate of \$600 per year, plus payment of their tuition fees, books, lab expenses, and uniforms for a maximum of four years. While on summer cruises they receive the pay of midshipmen on active duty.

Contract students are civilians who have contracted with the Navy to accept a commission in the Navy or Marine Corps Reserve, and who are designated Reserve Midshipmen for administrative purposes only. They do not receive the compensation or benefits paid to those in the regular category. They are entitled to the uniforms provided the regular people, and they receive payment of commuted rations during their final two years of NROTC training. During the vacation period, between their junior and senior years in college, they are required to make the summer cruise. Upon graduation and commissioning they may, if so desired, and providing their services are required, apply for active duty and serve for two years, with the further option of applying for retention in regular service if selected.

A third type, the naval science student, may also enter the NROTC program. These are men who are ineligible for enrollment in the unit solely because there is no room for them. They take the courses in naval science for the college credits they gain from each course. If vacancies occur in contract ranks, these men are given first preference in filling the vacancies.

Each successive year it is planned to gradually increase the size of the NROTC Unit until it has approximately 220 midshipmen enrolled and from then on the Unit will operate on that basis.

In addition to the NROTC Unit, two other schools have operated on the campus under the direction of the Professor of Naval Science:

- (1) the School of Naval Administration, which was set up to train selected officers for assignment to duty in the administration of American held Pacific Island Bases;
- (2) the School of Personnel Administration, which was set up in the School of Education of Stanford University for the training of selected officers in the latest methods of personnel management.

C.E. CROMBE, jr., Capt., USN,
Professor of Naval Science.

DEPARTMENT OF ATHLETICS AND PHYSICAL EDUCATION

The departmental staff for the academic year 1946-1947 consisted of the following persons:

(1) Administrative Personnel -

Alfred R. Masters,
Director of Athletics and Physical Education

Eunice Du Prau,
Office Manager and Executive Secretary

Donald E. Liebendorfer,
News Service Director and Administrative Assistant

D. Gene Coldiron,
Manager of Operations

Jacob C. Irwin,
Manager, Encina Gymnasium Store

Emanuel B. McDonald,
Superintendent Athletic Buildings and Grounds

E. W. Van Gorder,
Superintendent Stanford Golf Course

Mr. & Mrs. Allen Ross,
Co-directors of the Stanford Riding School.

(2) Athletic and Physical Education Personnel -

(a) Football: Marchmont Schwartz (Director),
Philip Bengtson, Ray Hammett, Allen H. Elward
and Charles Taylor.

(b) Basketball: Everett S. Dean (Director),
Philip Bengtson and Student Assistant,
Jack Dana

(c) Baseball: Harry M. Wolter (Director),
Ray Hammett.

(d) Track and Field: Jack A. Weiershauser, (Director)
Cornelius Warmerdam.

- (e) Tennis: Elwyn Bugge (Director), Student Assistants.
- (f) Swimming, Diving and Water Polo: Ernst M. Brandsten (Advisory Director), Tom Haymie, Myron Sprague.
- (g) Golf: Edward M. Twiggs, (Acting Director).
- (h) Gymnastics: Ernest P. Hunt (Director), Student Assistant.
- (i) Fencing: Elwyn Bugge
- (j) Rugby: W. J. Classen and James Wylie
- (k) Boxing: Clayton Frye, Student Assistant
- (l) Soccer: Student Assistant
- (m) Wrestling: Student Assistant
- (n) Intramural Sports: Fall Quarter - Cornelius Warmerdam; Winter and Spring Quarters - D. Gene Coldiron.
- (o) Trainer: D. Conrad Jarvis.

Resignations: Clayton Frye resigned to take a position with the California State Athletic Commission, and Cornelius Warmerdam resigned to return to his Alma Mater, Fresno State College.

With the exception of freshman intercollegiate teams, this is the first year since the war that we have operated a complete intercollegiate program. The Pacific Coast Conference permitted freshmen to play on varsity teams during this period, but this was discontinued after June, 1947.

The success of our intercollegiate teams was quite marked considering the fact that the war forced the University to discontinue intercollegiate competition for the duration. Observers predicted our football team would be in last position when the season was over, but when the final game was played, the Conference record showed us to be in the fifth position.

Likewise, we were not supposed to go very far in basketball, but we did and even managed to split our series with the Conference champions, the University of California at Los Angeles.

We had exceptionally fine teams in swimming and golf. Both teams were Conference champions.

Special attention was given to the intramural program throughout the year with the result we had more students participating than ever before. Our efforts will continue to center on this phase of the Departmental program because of the highly desirable feature of making athletic competition available to those boys who are not able to qualify for our intercollegiate teams.

The professional or teacher training phase of Physical Education was transferred to the School of Education immediately after the war. Mr. James Curtis was appointed as a co-ordinator between the School of Education and the Department of Athletics and Physical Education with the members of the latter department being "loaned" to the School of Education for instructional purposes. An advisory committee consisting of members from both the School of Education and the Physical Education Department has been selected for the purpose of supervising the professional curriculum and also to advise students who are majoring in Physical Education. There is still work to be done in perfecting and expanding this program.

Many leaders in the field of intercollegiate athletics have become alarmed over the growing tendency on the part of some universities and colleges since the termination of the war to improperly recruit and to improperly subsidize athletes. It has become so bad in certain quarters that the National Collegiate Athletic Association has recognized these evils and a committee is now at work drafting measures which is hoped will definitely stop the present unfortunate trend.

It is the opinion of your Director of Athletics that if the majority of the members of the National Collegiate Athletic Association approve the measures now being considered, that the Association may split up into two groups - those who wish to conduct intercollegiate athletics on a reasonably decent basis and those who do not want to conform to any standards whatsoever. Then those of us who wish to keep intercollegiate athletics on a high plane should never schedule contests with those who do not want any restrictions.

Incidentally, the showdown on this issue will probably occur at the next meeting of the National Collegiate Athletic Association at New York City the first week in January, 1948.

Alfred R. Masters
Director of Athletics
and Physical Education

STUDENT HEALTH SERVICE

Staff:- George H. Houck, M. D., Director and Professor of Medicine; John F. Eckert, M. D., Assistant Director; Lois P. Todd, M. D., Assistant Professor of Hygiene; D. F. Rey, M. D.; E. L. Bormann, M. D.; S. P. Mitchell, M. D.; Stanley Lourdeaux, M. D.; Charles E. Shepard, M. D.

Nurses:- Mrs. Mary F. Wood, R.N., head nurse; Miss Elen Elsner, R.N.; Mrs. Mae Holland, R. N.

Laboratory Technician:- Miss Jean Faulds.

Office:- Mrs. Harriet D. Smith, secretary, Health Service; Mrs. Mary T. Seago, secretary to Director; Miss Barbara Taylor, receptionist.

The academic year 1946-47 represents the first full year of operation for the Stanford Health Service since its reorganization. Stanford students now receive, with unimportant exceptions, full medical and surgical treatment and hospitalization whenever needed. Professional services are available at any hour of the day and upon any day of the year within a radius of 10 miles of the University. Greater efficiency has been achieved by the consolidation of the former Men's and Women's health services. The work upon the Campus is now carried on in the east wing of the Women's Gymnasium which has been extensively remodelled to provide more physician's offices. The staff of physicians, nurses and secretaries has been greatly enlarged, and the loss of the student patient's time through waiting has been significantly reduced.

Students who are seriously ill or who need surgical treatment are hospitalized in the Palo Alto Hospital upon the Campus. Minor illnesses are frequently cared for in the Rest Homes maintained upon the Campus by the Stanford Mothers Club. A 45 bed infirmary has been set up at Stanford Village and is held in readiness for epidemics. This infirmary will be operated by the Palo Alto Hospital when needed.

When medical care is rapidly and easily available it is utilized. This leads to earlier diagnosis and reduces both the period of disability of the individual student and also decreases the likelihood of transmission of communicable diseases to other members of the Stanford community. During the academic year 1946-47 the Stanford Health Service rendered 54,534 units of service. A unit of service means a contact between the student patient and the physician or nurses of the Health Service. This reveals that the average Stanford student was seen by Health Service in some way or another more than 7 times during the year, and is a gratifying index of utilization. The academic year 1946-47 was marked by a low incidence of infectious disease, which paralleled the experience of the local non-student population. Upon comparison with other schools, Stanford students are found to have

had less than the expected amount of emergency abdominal surgery, and there was far less psychiatric disability than had been anticipated. There was a greater incidence than expected of fractures and of minor injuries. The Stanford student is still strangely susceptible to poison oak dermatitis and to minor fractures.

It is both the desire and the chief objective of the Health Service to have the largest possible number of students participating fully in student life each day. The correction of any disorder which interferes with any phase of active participation in student life is considered to be the proper concern of the Health Service, and most forms of elective surgery are freely available to students without reference to date of origin. At this time the procedure and standards of the Stanford Health Service are equal or superior to the standards of the American Student Health Association for institutions of Stanford's size and type.

The Health Service keeps closely in touch with developments in student health work at other universities throughout the country. During the past year the Director has visited the health services of 10 other institutions. He has attended the meetings, both sectional and national, of the American Student Health Association, and represented Stanford at the Third National Conference on Health in the Colleges held in New York.

The Director was a member of the following University committees: Special Committee on Courses in Hygiene and Health Education; Committee on Public Health; Committee on Veterans Education and the Student Health Fund Committee. Doctor Lois P. Todd was a member of the Committee on Public Health and the Student Health Fund Committee.

George Hamilton Houck, M. D.
Director

PUBLIC HEALTH SERVICE

Staff:- George S. Luckett, University Health Officer; Margaret Riassetto, Public Health Nurse.

Communicable diseases:- The incidence of communicable diseases was again unusually low this year, with one epidemic, an outbreak of streptococcal sore throat involving 98 students who were eating in one dining hall. No secondary cases occurred. One student living in a fraternity house was discovered to have an active case of tuberculosis. All contacts were x-rayed and a tuberculin test was given by the Student Health Service to all with previous negative tuberculin reaction, or to those who had never been tested. No active case was found.

All entering students, food handlers and campus residents are offered the facilities of the Santa Clara County Tuberculosis Association for miniature chest films. This is a joint enterprise of the Student Health Service and this office.

There were 62 smallpox vaccinations performed, 101 smallpox vaccination inspections, and 116 certificates of smallpox vaccinations issued for faculty, staff and residents. The Student Health Service performs all such functions for students.

Regulation of foodhandling:- 280 inspection trips have been made to check the sanitation of kitchens and foodhandling methods. New Food Handling Regulations were issued by the Administration this past year. Meetings with housemothers, housemanagers, hashers, cooks and pet washers were held for the purpose of explaining these regulations. The University operated Stanford Village Dining Hall, located in San Mateo County, is under our unofficial inspection. It has been difficult to keep this kitchen up to University standards of cleanliness due to its construction, but remodelling and painting are bringing about much improvement. Inter Fraternity Council has appointed two representatives to assist in the inspection of fraternity house kitchens with a prospect of bettered conditions. In many fraternity house kitchens there have been installed adequate refrigeration and dish washing facilities, while in others such installation are planned for the summer vacation. The Administration is placing similar refrigeration and dish washing facilities in the girls' row houses.

Milk and Water Supply:- 60 milk samples were analyzed at the Palo Alto Hospital Laboratory. In general, counts were about at the same level as those of the previous year. Domestic water samples taken twice each month continue to show bacterial counts well below the maximum allowed by the United States Public Health Service. Samples of swimming pool water were taken monthly. Bacterial counts were uniformly low with the exception of one privately operated pool. No coliform bacilli were encountered in any samples.

Environmental control:- All campus rest rooms were inspected at two or three month intervals and found to be generally satisfactory.

The friendly working relations between the Student Health Service and this office have greatly facilitated the public health program.

GEORGE S. LUCKETT
University Health Officer.

PHYSICAL EDUCATION FOR WOMEN

STAFF. Maud Lombard Knapp, Director and Associate Professor; Margaret C. Barr, Marie Fenner, Miriam Lidster, Luell A. Weed, Assistant Professors; Sylvia Cain, Marie Lantagne, Instructors; Adelaide P. Brady, part-time Acting Instructor; Patricia Cashel, Acting Instructor Summer Quarter; Ellen Davis, Alice Lovett, part-time Teaching Assistants; Zenna Higgins, Secretary, Della Rucker January, Locker Room Attendant.

PROFESSIONAL PROGRAM. The professional program was carried on under the auspices of the School of Education. One student completed the requirements for the degree of Doctor of Education, three completed work for the Master's Degree and seven the Bachelors Degree, one being graduated with great distinction. Five completed work for a general secondary teaching credential with the field of specialization, physical education.

The available positions in physical education for women still greatly outnumber the candidates. There is a real need for more qualified students to specialize in this field.

ACTIVITY CLASSES. The enrollment in activity classes was back to pre-war level due to decrease in the number of women admitted. 2784 students were enrolled during the year. A \$2.50 fee for the rental and laundry of gymnasium suits was charged. Co-recreational riding classes were started in the autumn quarter under Mr. and Mrs. Allen Ross. Students participating were most enthusiastic over the work even with the many difficulties encountered. The riding ring was completed in the spring quarter. About one-fourth of all activity classes were upper division and graduate students. Many others would have enrolled had it been possible to register in the class of their choice.

RECREATION. The Women's Athletic Association in cooperation with the Department promoted many recreational activities. Eight sports days were held, with the University of California, Mills, San Mateo Junior College, and San Jose State College. May 10th the annual Tri-Sports Day (California, Stanford, Mills) was held at Mills. Activities were archery, fencing, tennis, swimming. May 26-29 was Annual Field Week. A gymkana was held at the Red Barn, tennis finals, softball finals, folk dance exhibition and a swimming meet.

Orchesis, under the direction of Mrs. Miriam Lidster, presented with the modern dance classes a Christmas program of Christmas carols and "The Juggler of Notre Dame"; attended the annual dance symposium for the colleges of northern California; were instrumental in bringing Charles Weidman and his modern dance group to the Stanford campus; gave a reception for Charles Weidman and group; and sponsored a Master Lesson with Charles Weidman.

The annual Orchesis dance concert was presented to a capacity audience in the Memorial Auditorium, and was later presented in part to the Girl's League of Mountain View High School, Palo Alto High School, the Veteran's Hospital in Palo Alto, and the Stanford Faculty Women's Club.

A group of women students started rifle shooting under Captain Hutchinson and Sergeant Toliver of the Military Department.

Late in the year the Co-Recreational Committee began to function. Folk Dance (Hoedowners) Alpine, Badminton clubs were active. W.A.A. and Men's Athletics contributed an equal amount for financing the clubs. The Hoedowners reorganized in the fall under the direction of Mrs. Lidster and actively participated in the California Folk Dance Federation. They were co-hostesses with The Palomanians, (folk dance group from Palo Alto) for the May Folk Dance Festival of the California Folk Dance Federation - afternoon of dancing and evening of dance and folk dance exhibitions. The Hoedowners presented an exhibition of dances at the May Folk Festival, at the Strawberry Brunch during the Stanford Convalescent Home Drive, and for the Veteran's Hospital in Palo Alto.

A meeting of representatives of all colleges in the Bay area was held to plan inter-college and sports programs for the coming year.

The California State Conference, American Federation of College Women was held at Stanford March 28-29 with Stanford W.A.A. hostess.

STAFF ACTIVITIES. Mrs. Maud Lombard Knapp attended executive meetings of the State Association for Health, Physical Education and Recreation at Fresno in November and January; the State Association convention at Santa Cruz April 1 and 2; the conventions of the AAHPER at Seattle April 22-26; and the Western Society of Physical Education for College Women in Seattle April 21. She was Vice-President for Physical Education of the State

Association CAHPER and planned the physical education part of the program for the State Conference in April. She is President elect of the Bay Section, CAHPER. On the campus she was Director of Women's Physical Education, program adviser of professional students in physical education, adviser for Master Theses and Dissertations for Doctorate in Education with field of specialization, physical education; lower division adviser, member of the Master's Committee and Credential Committees, School of Education; Chairman of the Advisory Committee, Pi Lambda Theta; Faculty co-adviser to Women's Athletic Association; faculty member of the Co-Recreation Committee. She had two charts "Objectives of Physical Education" published by the Stanford Press.

Margaret C. Barr was the secretary of the Santa Clara Unit of CAHPER for 1946-47, also 1947-48; chairman of Lifesaving and Water Safety and member of Disaster Committee of the Palo Alto Chapter of the American Red Cross. She was a member of the Fencing Sub-Committee and consultant for annual meeting for N.S.W.A.; member of the Executive Committee of the San Francisco Bay Counties Board of Women Officials and on Constitution Revision Committee, and wrote an article for the handbook, "Spirit of Officiating." She is a National Hockey Umpire and a National Official, Judge of Member of Examining Committee in basketball. She attended the following conferences: western Society of Physical Education for College Women in Seattle, at which, as chairman of a study committee she gave a report on "Trends in Athletics for College Women." AAHPER in Seattle, April 22-26; CAHPER at Santa Cruz, April 1 and 2 at which she was a member of the panel Physical Education for College Women.

Adelaide P. Brady attended the Student Health Conference in San Francisco, the California Association for Health, Physical Education and Recreation conference in Santa Cruz April 1 and 2; the Western Branch of the American Public Health Association in San Francisco May 27-29; and the American Physiotherapy Association Convention at Asilomar in July.

Marie Fenner was intramural adviser. She attended the CAHPER conference at Santa Cruz and the AAHPER convention at Seattle, April 22-26 and the convention of the Western Society of Physical Education for College Women at Seattle April 21. She is a National Official in basketball.

Marie Lantagne was co-adviser of the Women's Athletic Association and sponsor of the Badminton Club. She was elected President of the San Francisco Bay Counties Board of Women Officials. She attended the annual conference of the CAHPER at Santa Cruz in April; the Western Society of Physical Education for College Women's convention and the annual convention of AAHPER in Seattle April 21-26.

Miriam Lidster participated in folk dance exhibitions and demonstration with the Palomarian folk dance group and the Redwood City Docey-Do Square Dance group at the Veteran's Museum in San Francisco, the Folk Dance Festival in Sacramento, and the Folk Dance Festival at Stanford; danced in a movie of the Redwood City group to be used in news reel and for educational purposes; danced in the fall concert given by the San Francisco Dance League. She attended two four day teacher's institutes on square and folk dance at the University of California Summer School and the teacher's institute organized and conducted by the Folk Dance Federation of California. She attended the CAHPER conference at Santa Cruz, April 1 and 2, the annual AAHPER convention at Seattle April 22-26. She is a member of the national Dance Committee, AAHPER; the California Association for Health, Physical Education and Recreation; Dance League of San Francisco, Folk Dance Federation of California, Palomarians, Docey-Do Club, Quota Club (treasurer for 1947-48). She was faculty adviser for Orchesis and the Hoedowners.

Luell Weed attended the California Ski Association Conference at Santa Cruz, October 12 and 13; the CAHPER conference at Santa Cruz April 1 and 2; the Western Society of Physical Education for College Women and the Southwest District AAHPER convention and the national AAHPER convention at Seattle April 20-26; the Northern California Camp Counselor's Conference, May 18 and the National Association of Physical Education for College Women Workshop at Estes Park, Colorado, June 18-28. She is a member of the Public Relations Committee of the National Association of Physical Education for College Women; the Tennis Umpire's Rating Committee of San Francisco Bay Counties Board of Women Officials; Service Committee of California Ski Association; member of the Bay Federation

Council of California Ski Association; coordinator of Disaster Preparedness Committee of the Palo Alto Chapter of the American Red Cross; secretary-treasurer of Western Society of Physical Education for College Women and was on the Program and Arrangements Committee for the Seattle convention. She is President elect for the Southwest District AAHPER; and faculty adviser for Stanford Women's Tennis Club and Stanford Ski Club.

PHYSICAL THERAPY

Staff. - Lucille Daniels, associate professor and director; William H. Northway, associate professor and medical director; Marian Williams, assistant professor. Helen Hardenbergh, acting assistant professor (part time); Irene Anderson Bacon, instructor; Eleanor Dean, M. Caroline Wells, and Katherine Hatcher Macomber, acting instructors; Herbert Browne, special lecturer; Lucile Eising, special lecturer and clinical supervisor (part time); Dorothy Young, Jeanne Hall, and Maxine Schuldt, clinical supervisors (part time); Bernice Ringman, Barbara Fitch, Esther Snell, Verona Hardy, Ruby Green, and Sarah Semans, teaching fellows; Louise Briggs, secretary.

Program. - Graduate and undergraduate programs have been available at Stanford with a total enrollment of 119 students. In addition, 89 physicians and physical therapists attended special courses given during the summer.

The enrollment per quarter:

<u>1946-47</u>	<u>Number</u>
Autumn	61
Winter	59
Spring	51
Summer	63

A total of 42 completed the professional course for graduate students and 13 received the A. B. degree in physical therapy. Of the latter group, two students were elected to Phi Beta Kappa and were graduated "with distinction" and "with great distinction."

Five students received the A. M. degree in Physical therapy. The thesis topics were: "Physical Therapy Services in Selected Public Health Agencies," "Basic Therapeutic Exercise Courses in the Division of Physical Therapy at Stanford," "The Effect of Hot Packs on Subcutaneous Temperature and Deep Temperature of Muscle at Rest and During Contraction," "Therapeutic Exercise and Functional Activities in the Treatment of Paraplegia," and "The Effect of Skin Anesthesia on Muscle Contraction Following Application of Hot Packs."

Material from the last thesis, by Barbara Fitch, was reproduced in an article published in The Archives of Physical Medicine, August, 1947. The authors were Dr. Victor E. Hall, of the Physiology Department, and Elba Munoz and Barbara Fitch, fellows of the National Foundation for Infantile Paralysis in the Division of Physical Therapy.

Special Courses. - A course for physicians in the treatment of infantile paralysis was held on the Stanford

campus July 14, 15, and 16 under the direction of Dr. William H. Northway and Lucille Daniels. The National Foundation for Infantile Paralysis made it possible for the following lecturers to have a part in the program: Dr. Miland Knapp, University of Minnesota; Dr. Jessie Wright, University of Pittsburgh; Lois Olmsted, Joint Orthopedic Nursing Service, New York; Catherine Worthingham, National Foundation for Infantile Paralysis, New York; and Mary Eleanor Brown, State Reconstruction Home, West Haverstraw, New York. Dr. Victor Hall, from the Department of Physiology, spoke on "The Physiology of Poliomyelitis." Clinical demonstrations were given at Children's Hospital by Dr. Edward Shaw and Dr. Lucile Eising and at Stanford Lane Hospital by Dr. Northway. Fifty-two physicians from the West Coast and the western states attended the course.

A Workshop in Therapeutic Exercise was held July 14 to August 2. Courses in the treatment of poliomyelitis, cerebral palsy and selected conditions were offered. Dr. James B. Mennell, of London, England, author of numerous textbooks in physical medicine, was a member of the Workshop staff. Lecturers from various universities and other institutions were on the program. Sixty-one students were enrolled.

Scholarships. - Forty-nine students received scholarships from the National Foundation for Infantile Paralysis; one from the Visiting Nurse Society of Philadelphia and the National Foundation for Infantile Paralysis; and one from the Ohio State Department of Public Welfare. Teaching fellowships were granted by the National Foundation for Infantile Paralysis to six graduate students working toward advanced degrees in the University.

Special Grants. - A five year grant of \$150,000.00 was made to the Division of Physical Therapy by the National Foundation for Infantile Paralysis. The purposes of the grant were to strengthen the undergraduate and graduate programs and to make available an epidemic aid unit consisting of personnel experienced in teaching and in the care of the infantile paralysis patient. Selected members of the staff have been placed on call for emergency service.

Department Contributions. - The Physical Therapy Clinic, maintained at Stanford Village, served not only as a laboratory for the physical therapy students but rendered a service to the University in the treatment of patients referred by the Health Service. The statistics follow for 1946-47:

<u>Quarters</u>	<u>Student Visits</u>	<u>Other Visits</u>
Fall	339	171
Winter	518	139
Spring	438	183
Summer	158	100
	1453	593

Conditions such as fractures, nerve injuries, sprains and strains, cerebral palsy, scoliosis, poliomyelitis and post-operative orthopedic conditions were treated in the clinic under the careful supervision of staff members.

Faculty Activities. - Marian Williams attended the National Conference of the Congress of Physical Medicine in New York during September and a conference on "Research in Physiology in Relation to Infantile Paralysis" in Iowa City sponsored by the Department of Physiology of the University of Iowa and the National Foundation for Infantile Paralysis. She attended a National Executive Committee meeting of the American Physiotherapy Association in Chicago in January. A paper on "Scoliosis" was presented at a conference of the Washington Chapter of the American Physiotherapy Association at Seattle in April. She attended the National Conference of the American Association for Health, Physical Education, and Recreation in Seattle at that time. During the year Miss Williams served as national chairman of the Relations Committee of the American Physiotherapy Association, program chairman for the National Conference of this organization held at Asilomar, Pacific Grove, California, July 6-9, and legislative chairman for the Northern California Chapter of the American Physiotherapy Association. She spoke to the following groups during the year: the senior girls at the Palo Alto High School on "Physical Therapy as a Vocation," a Parent Teachers Association Study Group in San Francisco on "Posture," and the San Mateo Section of the California Association for Health, Physical Education, and Recreation on "Physical Therapy in Relation to the Physical Education Field." She was co-author of a manual on Muscle Testing published by W. B. Saunders Co., Philadelphia, December, 1946, and continued work during the year on a textbook in therapeutic exercise.

Dr. Helen Hardenbergh served on the Medical Advisory Committee of the Northern California Chapter of the American Physiotherapy Association for the year. She was author of an article entitled "Ethics for the Physical Therapist: From the Point of View of the Medical Practitioner" published in The Physiotherapy Review, September-October, 1946. She attended the International Women Physicians' Congress in Amsterdam June 18 to 24 and visited hospitals and clinics in France, England, Belgium and the Scandinavian countries during a two months' stay in Europe.

Maxine Schuldt served as national exhibits chairman of the American Physiotherapy Association and treasurer of the Northern California Chapter of that organization.

Lucille Daniels attended the National Conference of the Congress of Physical Medicine in New York in September. She presented two papers, "Muscle

Re-education" and "Muscle Testing" at a conference on "Research in Physiology in Relation to Infantile Paralysis" in Iowa City sponsored by the Department of Physiology, University of Iowa and the National Foundation for Infantile Paralysis. She served as president of the Northern California Chapter of the American Physiotherapy Association for the year 1946-47, chairman of the section on "Functional Anatomy" and general chairman of activities at the National Conference of the American Physiotherapy Association held at Asilomar, Pacific Grove, California, in July. She was member of a special committee of the American Physiotherapy Association to study clinical practice in the schools of physical therapy. She also served as a director of the Crippled Children's Society of Santa Clara County, Inc. She was co-author of a manual on Muscle Testing published in December, 1946 by W. B. Saunders and Co., Philadelphia.

SCHOOL OF HUMANITIES

Staff.—During the year the School of Humanities was served by the following faculty: John Wendell Dodds, Dean; James A. Work, Acting Dean (summer quarter); Felix M. Keesing, C. Langdon White, professors; Paul Fejos, consulting professor; Robert M. P. Grinnell, Jeffery Smith, assistant professors; Curtis A. Manchester, Jr., visiting lecturer; and Milton C. George, instructor. Professor Anthony E. Sokol served as associate director of Pacific-Asiatic-Russian Studies.

Members of departmental faculties who contributed directly to the work of the School were: William Irvine (English), Richard F. Jones (English), Maxwell H. Savelle (History), George F. Sensabaugh (English), Friedrich W. Strothmann (Germanic Languages), and Virgil K. Whitaker (English).

Majors.—There were 84 majors (including 8 non-degree graduate students) in the School during the year, divided among the following concentrations: American Civilization (1), Anthropology (1), Archaeology (1), the Arts (5), Geography (22), Music (5), France (1), Hispanic America (15), and Pacific-Asiatic-Russian Studies (25).

Thirty-seven students were awarded the A.B. degree in the concentrations of the School, two with great distinction, two with distinction. Two School majors were elected to Phi Beta Kappa.

Honors Program.—The new Honors Program, which had been planned during the academic year 1945-46, got off to a good start. It was administered by a committee consisting of the following members: Virgil K. Whitaker (chairman), Robert M. P. Grinnell (executive secretary), Norman Philbrick, Maxwell H. Savelle (who replaced Arthur E. Bestor, Jr.), Jeffery Smith, and Friedrich W. Strothmann.

Twenty-five students were enrolled during the year, of whom one, Miss Nancy Erbit, was graduated with distinction. Her Honors essay, written under the direction of Professor Savelle, has as its subject "Painters and Patriotism in the American Revolution." In addition, two other students completed very creditable senior essays during the year, writing on the following subjects: Paula Jones, "The Development of Native Tendencies in Early American Art"; and Roger Tilton, "The Objectives of Painting in Terms of Its Visual Means."

In accordance with the School's policy of demanding the highest standards it was necessary to drop several students for failure to maintain the required "B" average.

The committee members have devoted a great deal of time to counseling individual Honors candidates, both at the time they enrolled in the program and at intervals during the year. They have tried to assist in the intellectual development of the students and to encourage them to maintain the highest scholastic standards. This continuous counsel has developed into one of the most valuable parts of the program.

The Honors candidates have also been enthusiastic about a series of informal evening meetings held in an effort to bring the group together to discuss some topic of general interest or to hear one of the students outline his plans for a senior essay

and to make criticisms and suggestions. Miss Erbit, Miss Jones and Mr. Tilton all outlined their essays at such meetings, and Mr. Tilton modified his plan into a very much more penetrating attack upon his problem as a result of suggestions both by members of the committee and by the Honors candidates present. The committee felt that these gatherings, which combine genuine intellectual discussion with an informal social atmosphere, have been extremely stimulating both to the committee members and to the students.

The committee has also given a great deal of attention to perfecting the two course sequences, Humanities 61, 62, 63, and Humanities 101, 102, 103, which are an integral part of the Honors Program, and has had the benefit of candid and helpful advice from students.

Hispanic American Regional Studies.--During the past year the Hispanic American Regional program made noteworthy progress. The first group of students working for the M.A. and Ph.D. degrees entered the graduate program, and students preparing theses left at the end of the year for various Latin American countries, including Mexico, Colombia and Brazil. One student, Mr. Joaquim Duarte, who left for Brazil, was awarded a Pan American Airways fellowship by the Institute of International Education. The program of courses for the coming year has been enriched with offerings in Latin American anthropology, Spanish and Latin American music, and current developments in Spain and Latin America. This last course, an advanced seminar, is to be given under the auspices of the Hoover Library. It is probable that the Hoover Library will figure more and more prominently in the Hispanic American studies program as its acquisition program builds up the Library's holdings in the Spanish and Latin American field; a large collection of Spanish material, and more recently of Uruguayan documents, has been acquired in the course of the year. The School of Education is now collaborating in the program by offering the teacher's recommendation in Hispanic American regional studies.

Pacific-Asiatic-Russian Studies.--The Pacific-Asiatic-Russian Program continued to develop along the lines described in last year's report. In addition to the current grant of \$50,000 from the Rockefeller Foundation, the Program again obtained funds from the Chinese Government for cultural scholarships. Eight students were awarded scholarships under this \$7,000 grant. Funds for scholarships for 1947-48 have been granted by the Chinese Government.

The cooperative efforts of the staff working in the program and representing the various schools and departments resulted in a revised program of courses and requirements, which will, it is hoped, lead to an even better integration of the various aspects of the Program than was possible last year.

Twenty-five students were registered as majors in the Program during the year. Sixteen students were awarded the degree of A.B., one with great distinction. One student was elected to Phi Beta Kappa. The total number of students in the various courses making up the Program was: Autumn, 427 ; Winter, 543 ; Spring, 464 .

These figures indicate the growing interest among Stanford students in the areas and peoples included in the program.

The cooperative introductory course on Far Eastern Civilization was continued during this year, the first quarter being taught by professors Lin (visiting lecturer), Manchester, and Buss, the second quarter by professors Keesing, Chan, and Spiegelberg, with special guest lecturers for occasional talks on particular subjects.

During this year Professor Shau Wing Chan made a trip to various universities and colleges of the country to study work done in Chinese language, literature, and civilization. A similar journey was also made by the Associate Director of the Program, Professor A. E. Sokol, with the special purpose of investigating Far Eastern and Slavic programs in other institutions and the progress made in the use of records in the teaching of foreign languages. As a result of his findings a test program utilizing audio aids in teaching intensive Russian was begun during the summer of 1947, with very encouraging results.

Foundation Support.—The School of Humanities continued to operate in part under grants from the Rockefeller Foundation for the promotion of Far Eastern studies and from the Viking Fund for the development and exploration of relationships between anthropology and the humanities. As a part of this latter program a conference was held at Santa Barbara on May 16 and 17. Twenty-eight people were in attendance at this conference, about one half of them from the various faculties of the School of Humanities, the other half being west coast anthropologists. Professor Ralph Linton of Yale University was one of the main speakers.

This conference was in all probability the first of its kind in academic history, its task being to explore possible lines of liaison between anthropology and the humanities. Particularly notable was the enthusiastic participation by both humanists and anthropologists and the hopeful indication that such mutual relationships might prove very fruitful in the future. A complete report of this conference has been submitted to the president as a separate document.

Creative Arts Prizes.—The School offered a \$100 prize in creative writing for the second year. The winner was Maxwell Arnold, Jr. for his short story, "Never Strike a Cripple." For the first time a prize of \$100 was offered in graphic art. This was won by Barbara Taggart for her entries of two oil paintings, a self-portrait and a study of a nude Negress. These won out over the art works of 38 other students.

Faculty Activities.—Mr. Dodds attended the Princeton Bicentennial on the Humanities in October, 1946, and spoke on "Approaches to the Humanities." He served throughout the year as chairman of the Editorial Board of *The Pacific Spectator*, which was launched in January of 1947 under the auspices of the Pacific Coast Committee on the Humanities for the American Council of Learned Societies. He was elected a director of the National Council of Teachers of English, and continued to serve as a trustee of Mills College. He spoke at the Los Angeles and Stanford meetings of the Alumni Association, gave the commencement address (*Reality: 1947*) at the University of Nevada on June 9, and

participated in the inaugural ceremonies of President Raymond B. Allen of the University of Washington, taking part in a Humanities Symposium on the subject, "The Meaning of the Humanities."

Mr. Keesing, professor of anthropology, has spent most of his time during the year as Associate Director of the School of Naval Administration, which is training naval officers for administrative duties in the United States-held Pacific islands. This work draws upon his extensive experience in the Pacific islands and knowledge of problems of applied anthropology and colonial administration. In the late summer of 1946 Mr. Keesing made a field trip under naval auspices to Guam and to islands of the new American trust territory in the interests of the Naval School work. In addition to the administrative and teaching duties of the School, Mr. Keesing taught a civilian class in anthropology in the fall and winter quarters, and participated in teaching the basic course on "Far Eastern Civilization." He also took part in the developing activities under the Viking Fund grant relating to humanities-anthropology collaboration. These have included organization of basic materials from anthropological literature connected with the purposes of the grant, engaging in preparatory work for the Santa Barbara Conference on "relations between the humanities and anthropology" (May 16, 17, 1947), and writing up the proceedings of that Conference. During the year Mr. Keesing has directed the preparation of extensive workpapers for training purposes in the School of Naval Administration, and also had charge of the preparation of handbooks by a group of workers at the request of the Navy relating to the different administrative areas in the United States-held islands. He has published a paper on "Administration in Pacific Islands" (*Far Eastern Survey*, Vol. XVI, No. 6, 1947), and several book reviews. In October 1946 he was one of the speakers at an Institute conducted by the Mei-ling Soong Foundation at Wellesley College, in Massachusetts. He is a member of the Anthropology Committee of the Pacific Science Board, recently constituted by the National Research Council, and also a member of the Board's West Coast Advisory Committee. He was also a member of the Executive Committee of the American Anthropological Association for the year 1946, and is Vice-President of the Society for Applied Anthropology. He is on the Research Committee of the American Institute of Pacific Relations and was one of the delegates from the Bay Region Group of this Institute to the National I.P.R. Conference at Asilomar in March 1947.

Mr. White gave the following addresses during the year: "Let's Get Acquainted with Our Neighbor — Latin America" (Philomathean Club, San Francisco); "Rich Land, Poor Land—America at the Crossroads" (American Association of University Women, Lindsay, California; Watsonville Public Forum; Thatcher School, Ojai, California); "Signposts to the Future" (A.A. U.W., Glendale; Stanford Alumni Conference; Sunset Club, Seattle, Washington; Tacoma World Affairs Council, Tacoma, Washington); "One World or No World" (San Francisco District Dental Society). Mr. White served on the Executive Committee of the National Council of Geography Teachers and as Visiting Professor of Geography at Ohio State University during the summer quarter. With

Samuel G. Inman and Harold Davis he completed a book, "Know your Neighbor--Latin America."

JOHN WENDELL DODDS
Dean

ART

In September 1946 the Department of Art was organized to include three units: the instructional program formerly known as Graphic Art, the Thomas Welton Stanford Art Gallery, and the Leland Stanford Junior Museum. Prior to this, the Art Gallery and Museum reported directly to the President's Office. This reorganization makes possible an intensive, coordinated development of Stanford's varied art program.

The new organization has necessitated the study of the University's art resources in relation to its needs and potentialities. A preliminary report submitted to the President's Office in December 1946 presented a survey of the situation. Some progress was made during the year in putting into effect the recommendations made in this report, but much work lies ahead. For the sake of clarity, the three units of the Department will be discussed separately.

INSTRUCTION IN ART

Program.—The purposes of instruction in art were defined as threefold: to offer Stanford students an orientation to art through studio, lecture, and discussion courses; to cooperate with other University departments in demonstrating the intimate relation between art and other phases of human activity; and to provide pre-professional training for students who select art as their major field. It was apparent that the program needed strengthening in the following ways:

- Orientation courses specifically planned for Lower Division students;

- More intensive historical and critical courses for students in art and other areas of specialization;

- Craft and design courses emphasizing theory and practice in three-dimensional work, especially as related to industrial and architectural design;

- Art education courses emphasizing procedure at the public school and college levels, and

- Courses in photography and the graphic processes.

The art faculty has long recognized that for reasons beyond its control the program was not as comprehensive as was desirable in a university of Stanford's stature. They have recognized that the potential student interests and development were only partially served by the art courses offered by the disproportionately small staff. With the increasing interest in the arts throughout the country, but especially on the West Coast, they have felt an urgent need to provide enriched offerings. They have, however, been aware of the fact that it is better to handle a limited program well than to offer a superficial survey of the entire field. The changes, noted below under Faculty, are the first steps in strengthening the program.

Enrollment.—Seventy-seven undergraduate (upper division) students were registered as majors in Art and the degree of Bachelor of Arts was granted to twenty-seven. Twenty-one students were registered for graduate work and the degree of Master of Arts was granted to two.

The yearly total class enrollment for the past seven years is shown in the following table, together with the number of Art majors (both upper division and graduate).

	1940-41	1941-42	1942-43	1944-45	1945-46	1946-47
Students	1,432	1,041	721	739	1,123	1,581
Majors	46	48	34	19	52	98

Faculty.—The division faculty for the year included Ray Nelson Faulkner, professor and executive head during the autumn, winter, and spring quarters; Edward McNeil Farmer, professor and acting executive head during the summer quarter; Daniel Marcus Mendelowitz, associate professor; Victor Mikhail Arnautoff, assistant professor; Seymour Benjamin Locks, instructor; Friedolin Kessler, John Vincent Lesley, Daniel Rhodes, and Hayden Arthur Scott, acting instructors.

In addition to his administrative and teaching responsibilities, Mr. Faulkner lectured on various phases of contemporary architecture to the Palo Alto Rotary Club, the Oakland Art Teachers Association, on the Tuesday Evening Series, and at the Alumni Conference; acted as a judge for the Scholastic Art competition; served on the Viking Fund Committee and on Columbia University's Committee on Talented Youth; was elected to the Board of Directors, National Education Association Department of Art Education; exhibited three water colors in the Student-Staff Exhibition; and his statement on "Future Developments: The Pattern of Post-War Developments in Military Psychology" was published in New Methods in Applied Psychology, University of Maryland Press. On leave during the summer quarter, he worked on a revision of Art Today, a textbook on art appreciation, published by Henry Holt in 1942.

Mr. Farmer, on leave during the fall, devoted that quarter to painting. In the winter, spring, and summer quarters, in addition to teaching, he handled the advising and registration of students for the department; taught the Wednesday evening class at the Palo Alto Art Club during the winter and spring; throughout the year carried on his work as chairman of the American Red Cross Tri-Chapter Arts and Skills Corps; exhibited three watercolors in the Student-Staff Exhibition, and three watercolors in the Exhibition of Peninsula Artists, American Association of University Women, Burlingame, winning second award; attended the meeting of the Western College Art Association at Claremont, California, and was elected president.

Mr. Mendelowitz had a one-man show of 28 watercolors at Gump's Galleries, San Francisco, another of 20 watercolors at the Elfstrom Galleries, Salem, Oregon, and exhibited 14 watercolors at the Palo Alto Public Library. He also exhibited at the Milch Galleries, New York City, Student-Staff Exhibition, Stanford Gallery, and American Association of University Women, Exhibition of Peninsula Artists, Burlingame; lectured on "Contemporary American Painting" for the Peninsula Chapter, American Association

of University Women, at Burlingame, on "Pre-Columbian Art" for the San Jose Art Club, San Jose, and on "Problems in Art Education" for the Burlingame Public School Teachers; served on the jury for making awards at the Santa Clara County Fair, Annual Exhibition of Santa Clara County Artists, September, 1946, and at the Kingsley Art Club of Sacramento, Annual Exhibition of Sacramento Artists, April, 1947; served as a councillor of the Pacific Arts Association, as a member of the Constitution Committee, and represented the Association at the National Education conference at Atlantic City, New Jersey. In addition to his teaching, Mr. Mendelowitz served as co-chairman of the Student-Staff Exhibition and was a member of the Committee on Audio Visual Aids and the Registration Committee.

In addition to his teaching, Mr. Arnautoff had a one-man exhibition of oils at The Artists' Guild, San Francisco, in November, 1946; participated in group exhibitions of San Francisco Bay region artists at the San Francisco Museum of art, at Gump's Galleries, and at Artists' Guild Gallery; gave an illustrated talk on the art of Palekh, U.S.S.R. (miniature painting on lacquer); instructed an evening class in painting at the California Labor School, San Francisco; participated in a forum on the subject of "Art and Society" at California Labor School; served as a member of the Board of Directors of the American-Russian Institute and as President of the Russian-American Society.

In addition to teaching, Mr. Locks taught drawing and painting at the Adult Center, San Jose, throughout the year; was President of the San Jose Art League, served as exhibition chairman, and spoke in a symposium "What is Modern Art"; served as co-chairman of and exhibited in Student-Staff Exhibition, and exhibited in San Jose Art League semi-annual exhibitions; gave a talk on the art curriculum for Education 140, Curriculum Development.

Three new appointments were made for 1947-48. Mr. Millard Buxton Rogers, formerly Head of the Art Department at the University of Southern California was appointed as Assistant Professor of Art and will offer courses in art history and act as Curator of Far Eastern Art. Mr. Victor King Thompson, formerly at Ohio State University, was appointed as Assistant Professor of Art to offer courses in architectural and industrial design as a replacement for Mr. Seymour Locks who resigned as Instructor in Art to accept a position at the San Francisco State College. Mr. Ernest Herbert Ziegfeld was appointed as part-time Acting Assistant Professor of Art to offer courses in design.

Space and Equipment.--To replace the highly unsatisfactory space in the old Roble Gymnasium, three new studios were developed in the Art Gallery Building. Two of these resulted from enclosing sections of the arcade, space formerly wasted. The other, however, occupies space formerly used - and still needed - for exhibitions. These studios have been partially equipped for instruction in design, minor crafts and graphic processes, and architectural and industrial design. Their proximity to the exhibitions in the Art Gallery marks a forward step in the physical unification of the art program, but their distance from the other center of instruction in the Graphic Art

Building minimizes this advantage.

Art reference and illustrative materials are inconveniently and somewhat inaccessibly housed in the Library stacks, the Rare Book Room, the Graphic Art Building, the Art Gallery, and the Museum. As a result there is no place in which students and faculty can pursue a coordinated study of books, reproductions, prints, and lantern slides. In addition to their disposition, it should be remarked that the illustrative materials available for instructional and study purposes are meager. The only important addition during the year was a number of lantern slides, chiefly of American and contemporary art, filling some of the many gaps in the existing collection.

Recommendations.

1. That the need for space designed for art instruction and in physical proximity to that used for exhibitions be carefully studied.
2. That serious consideration be given to the need for instruction in such crafts as ceramics, wood and metal work, and weaving; in such graphic processes as lithography, drypoint, and photography; and in sculpture.
3. That steps be taken to bring the collection of illustrative and reference materials up to adequate size and to make them more readily available to students and faculty.

ART GALLERY

Program.—Activities in the Art Gallery have centered around making the permanent and temporary exhibitions educationally useful and interesting to the Stanford community. The primary responsibility of the Art Gallery has been defined as providing art exhibitions which are an integral part of the total University program. To discharge this responsibility effectively, the exhibits must be more than a series of varied art displays: they must, insofar as is feasible, be closely related to the University's program of instruction, public exercises, and traditional functions and ceremonies. Through careful planning, exhibitions maintaining high art standards can become effective components in Stanford's educational pattern as has been demonstrated in several exhibits held in 1946-47.

Permanent Collection.—The major items in the permanent collection consist of the paintings given by Thomas Welton Stanford and others, the Asiatic and European art given by Mr. Mortimer Leventritt, and the Matisse lithographs given by Mrs. M. Stein. The collection, though miscellaneous, is valuable, but has not been properly catalogued, documented or maintained.

During the past year, progress has been made. An inventory has been completed, a few of the objects have been documented, and effort has been made to give all objects the care that they deserve. Special attention has been given to the Chinese and Buddhist items in the Leventritt collection as follows: one gallery has been arranged to show the chronological development of Chinese art; one displays various examples of Buddhist art; labels, documentation, maps, and explanatory materials are in preparation; and Mr. John LaPlante completed a Master's thesis on the art of the Sung Dynasty with special reference to the Leventritt collection. Members of the faculty made considerable use

of the exhibitions in instruction in several fields.

There is great need for a collection of colored reproductions and prints which can be loaned to students and staff for study and enjoyment. For over twenty years colleges and universities have experimented with such programs, and all reports indicate that such ventures have been highly successful. A suitable loan collection, started on a modest scale, would allow students and staff to learn about art through living with it.

During the coming year effort will be made to complete the documentation and restoration of the permanent collection; to formulate a definite, active policy of acquisition; and to encourage the cooperation of faculty outside the Department of Art, Stanford alumni, and friends of the University in the effective development and exhibition of the objects permanently held in the Gallery.

Temporary Exhibitions.--The schedule of temporary exhibitions appears in the following table. Effort was made to have the exhibits as varied as possible to demonstrate the breadth of art expressions, to illustrate their interrelationship with other areas of human endeavor, and to bring to the attention of the Stanford community the valuable art owned by the University. Several of the exhibitions - the Print Show, the Story of Jane and Leland Stanford, and the Coptic Textiles - were composed entirely of objects from the University's collection.

In order to increase the appeal of the exhibitions a number of devices was used. Insofar as possible exhibitions were scheduled in relation to the University's programs, such as the "Story of Jane and Leland Stanford" for Founders' Day.

STANFORD ART GALLERY
1946-47 Exhibitions

<u>Exhibition</u>	<u>Dates</u>	<u>Attendance</u>
1. "DEVASTATION" Watercolors, Gouaches, and Drawings by War Department combat- artists.	Oct. 1 - Oct. 20	962
2. "PRINTS OWNED BY STANFORD" University material.	Oct. 22 - Nov. 10	1026
3. "WOOD ENGRAVINGS AFTER WINSLOW HOMER"	Nov. 12 - Dec. 1	673
4. "FIGURE OF MAN IN ANCIENT AMERICAN ART" LIFE Photographic series.	Dec. 3 - Dec. 17	436
5. "FINE ARTS UNDER FIRE" LIFE photographic series.	Dec. 17 - Dec. 29**	208
6. "PRINTS BY EUROPEAN AND AMERICAN MASTERS" "WOODCARVINGS AND TOYS" From the Index of American Design.	Jan. 21 - Feb. 9	1064

**Gallery closed for repainting Dec. 30 - Jan. 19

7.	"WOODCARVINGS AND TOYS" From the Index of American Design (Con- tinued) "THE HUMAN FIGURE IN EUROPEAN ART" Reproductions from San Francisco Museum of Art.	Feb. 12 - Mar. 2	1085
8.	"THE STORY OF JANE AND LELAND STANFORD" Founders' Day Exhibition, University material.	Mar. 5 - Apr. 6	3411
9.	"DEPARTMENT OF ART STUDENT AND FACULTY EXHIBITION"	Apr. 8 - May 4	3230
10.	"COPTIC TEXTILES"	May 6 - May 25	1284
11.	"SOCIAL SATIRE OF THE 18th CENTURY - Hogarth, Gillray, Rowlandson" Prints, Loan from Mr. Achenbach. "SKETCHES BY DICK STARK."	May 27 - June 22	2548
12.	"HOUSES BY FRANK LLOYD WRIGHT" Museum of Modern Art show augmented with manuscripts and photo- graphic material loaned by Mr. and Mrs. Hanna and Mrs. Esther Born.	June 24 - July 21	3057
13.	"PAINTINGS FROM THE STANFORD COLLECTIONS"	July 23 - Aug. 17	2267
TOTAL			<hr/> 21251

Studio 3

"Medieval Man" - LIFE Photographic series. 5 weeks.
Paintings entered for the Humanities Prize Competition.
3 weeks

The Gallery was open after one Tuesday Evening Series lecture each month, and on-the-spot broadcasts over KSU were arranged. The displays were labelled and documented to promote understanding and two catalogs were published. News releases were prepared for the Stanford DAILY, the Palo Alto TIMES, and other Peninsula and San Francisco newspapers.

In addition to the regularly scheduled exhibits, the "Object of the Month" series was started from the Stanford Museum collection and drawings and prints were displayed in the foyer. It was heartening to note that general attendance was approximately 21,000, a number markedly higher than in recent years, and that the Gallery was frequently used for class instruction.

Staff.--Mr. George Harris, Acting Director of the Gallery, resigned as of May 1, 1947, and Mrs. Robert Cross was appointed Associate Director. Mr. Millard Rogers, appointed to the teaching staff for 1947-48, will also act as Curator of the Far Eastern Collection.

Space and Equipment.--The vestibule and first gallery benefited from a coat of paint, the lighting in the vestibule was improved,

and additional exhibition space was secured by installing display boards in the vestibule. There is still much to be done, however, to bring the Gallery up to minimum standards. Cases are needed for the display of three-dimensional objects; the artificial lighting in the galleries needs to be improved; and safe storage space for objects not on display should be constructed.

Recommendations.

1. That the permanent collection be restored, documented, displayed, and maintained in a fitting manner.
2. That the lighting in the galleries be improved; that suitable storage space be constructed; and that adequate display cases be procured.
3. That a lending collection of prints be started.

THE LELAND STANFORD JUNIOR MUSEUM

The Museum, central in the thoughts of the University's Founders, rich in tradition and associations, and potentially of great instructional and public relations value, has deteriorated for many years. The collection has grown without benefit of a definite policy of acquisition, has been unsatisfactorily displayed and documented, and has suffered through lack of proper maintenance. In spite of this the collection of approximately 25,000 objects is of great historic, artistic, educational, and monetary value, and is vastly superior to that in the possession of the great majority of the major universities. It stands as a monument to the foresight of the Stanford family and the University's friends and alumni who early recognized the need for actual contact with objects expressive of the world's culture.

Program.--The report on the Department of Art, referred to above, presented a preliminary analysis of the situation, a statement of the needs that the Museum could serve, and steps that could be taken to turn what is now a serious liability into a valuable asset. The achievements during the year are encouraging but are hardly more than a scratch on the surface of the complex task that lies ahead.

For the past two years the Museum has remained "Closed for Inventory." The inventory has now been completed by Mrs. Robert Cross and Professor Hazel Hansen. In addition, work on the Cesnola and Egyptian collections has gone steadily ahead under the direction of Professor Hansen; the status of objects on loan to the Museum has been clarified; objects of greater value to the Library, Geology, and Speech and Drama Departments have been transferred to them; objects damaged beyond repair have been removed; and a preliminary assorting and organizing of the major collections has been undertaken.

As yet no definite policy and program for the Museum have been formulated because of the complexity of the problem. There is, however, much basic work that must be done regardless of the eventual use made of the collection. This includes further assorting of the more useful from the less useful items; cataloging and documenting the major items; restoring and maintaining the important collections. Many phases of this work will provide graduate students with valuable opportunity for research and first-hand contact with museum methods and have already aroused considerable interest. With the cooperation of Professors Hazel

Hansen, Felix Keessing, Bernard J. Siegel, and Millard Rogers, it is hoped that work will proceed on the Classical and Egyptian, Anthropological, and Far Eastern collections

Staff.--The Museum staff has consisted of Mrs. Robert Cross, who also serves in the Art Gallery, and several part-time student assistants. For 1947-48 Mr. John LaPlante and Professor Millard Rogers of the Department of Art will devote part of their time to the Museum. The remainder of the program will be carried by volunteer assistance from other departments and students.

Space and Equipment.--The Museum has not been renovated for many years and the equipment is antiquated and in disrepair. With the exception of the offices, the basement corridors, and one basement workroom, there is no artificial light in the building. Until definite plans are formulated, it is believed that restoration and renovation should be limited to those areas in which work is being done or in which valuable items are housed. Other than the installation of electric lights in one basement room during the past year, the space and equipment have been unimproved.

Recommendations.--Until adequate support is forthcoming, the Museum will proceed with minimal speed and efficiency, and the program will be one of expediency and extemporization. It is recommended that work for the next year be as follows:

1. Continued analysis of the Museum's problems.
2. Concerted effort to raise funds for its support.
3. Continued work on the Classical, Egyptian, Anthropological, and Far Eastern collections.

RAY NELSON FAULKNER
Executive Head

ASIATIC AND SLAVIC STUDIES

The Department was first established in 1946, under the title "Department of Asiatic and Slavic Languages and Civilizations", which was later abbreviated to "Asiatic and Slavic Studies." It combines the work of the former Department of Slavic Languages with that in various Asiatic languages and civilizations which had been connected with the School of Humanities without any departmental affiliation. The staff consisted of the following members: A. E. Sokol, Associate Professor of Germanic Languages (Executive Head); Shau Wing Chan, Associate Professor of Chinese; Jack A. Posin, Associate Professor of Russian; Helen R. Ban, Frederic Spiegelberg, Lung-hsin Wu, Instructors; Nasser Jehanbani, Sarra Kliachko, Tseng Wu Liao, Teaching Assistants; Leib Schapiro, Nina Wiren (summer), Lecturers. During the autumn quarter, Dr. Lin Tung-chi lectured in the Department; Dr. Otto J. Maenchen, during the winter quarter, gave courses on Chinese and Japanese art, and in the summer quarter Dr. Anatole G. Mazour was visiting professor of Russian civilization and history in the Department. At present the Department is prepared to teach the following languages: Arabic, Chinese, Hebrew, Iranian (Persian), Japanese, Malay, and Russian. Courses on the literature, philosophy, and art of the peoples speaking these languages are also offered in the Department, unless such work forms part of the offerings of

other existing departments of the University.

This first year of its existence, the Department did not attempt to grant A.B. degrees, since its offerings were not as yet diversified enough in each language. Instead, such degrees were awarded in the Pacific-Asiatic and Russian Program, of which the work of the Department forms an integral part. Beginning next year, however, it is planned to expand offerings in Chinese and Russian so that A.B. degrees in either of these languages may be earned. In general, the Department concentrates its efforts on the efficient and effective teaching of the respective languages, trying to give its students as good a balance of speaking, reading, and writing as is possible in the time available. In this endeavor, it is making increasing use of phonograph records to supplement and extend classroom teaching.

During the summer quarter, intensive courses in elementary Russian (15 units, taught by Mrs. Kliachko) and intermediate Russian (taught by Mrs. Wiren) were organized to meet the demand of students, particularly of veterans, for a speeded-up program of language instruction. The response, especially to the beginning course, was very encouraging; three or four times many applied - from all over the country - as could be admitted. As the intensive course, using methods developed by the Army during the war, covers a year's work in one quarter and thus saves the students valuable time, it might well be that this summer work will become a regular feature of our language instruction.

Having been organized from already existing units, the Department started with a considerable number of students. For the two most important languages, the registration was:

	<u>Autumn</u>	<u>Winter</u>	<u>Spring</u>	<u>Summer</u>	<u>Total</u>
Chinese	40	40	32	--	112
Russian	80	65	47	23	215

Staff Activities.—Mr. Chan participated with other members of the School of Humanities in the courses H91 and H92, besides teaching courses on Chinese language and civilization. In the autumn quarter he made a trip east in order to see what other leading eastern institutions were doing in the field of Oriental studies and particularly to observe their methods of teaching the Chinese language to American students. He visited the University of Chicago, the University of Pennsylvania, Yale University, Harvard University, and Columbia University. During the year he served as Editor of Chinese Studies for the Stanford University Press. In the spring quarter, he served as Acting Executive Head of the Department. He published signed book reviews in Pacific Affairs, The Pacific Historical Review, and Far Eastern Quarterly. He has the following items of writing in progress: a two-volume set of elementary and intermediate Chinese texts promised for publication by the Stanford University Press in 1948; Home, a translation in English of one of the most outstanding modern Chinese novels by Pa Chin. He participated, by giving a talk on the international significance of the Chinese political situation, in the Stanford Alumni conferences in Seattle, Portland, Los Angeles, and Stanford University. He also spoke to the Palo Alto Kiwanis Club, the Civic Improvement Club of San Rafael, and attended the Humanities-Anthropology Conference

at Santa Barbara. In the summer he gave a lecture at Colorado Teachers College, Greeley, Colorado, on Chinese poetry.

Mr. Posin delivered a lecture in the series on Modern Russia at the Community Center of Palo Alto, speaking on the topic, "What Are Russian Authors Writing About?". He took part in the conference on Humanities and Anthropology, sponsored by the School of Humanities, at Santa Barbara. He has contributed articles on Korolenko and Veresoyev to the Columbia Dictionary of Modern European Literature, and has regularly written book reviews for Books Abroad, a quarterly publication of the University of Oklahoma Press. In addition, he is working on an essay on Slavic Literature for the Symposium on World Literature.

Mr. Sokol was promoted to the rank of Professor, effective the academic year 1947-48. In the spring, he visited a group of eastern institutions to study the work done in Asiatic and Slavic studies, and to become acquainted with methods of using audial aids in language teaching. As a result of his tour he was able to begin, with the help of the Department staff, experiments in the use of phonograph records in the teaching of languages, which promise to increase the effectiveness of instruction to a considerable degree. He gave a talk to the Stanford alumnae organization in Oakland on "The Problem of the Netherlands Indies." He published an article entitled "The Prince Eugene, A Study in Ships' Names", in the Marine Corps Gazette. An article on "The Name of Quelpaert Island" was accepted for publication by Isis of Harvard University. He is at present finishing a book, The History of German Civilization, an article on "Production versus Control of Communications in Indonesian History", one on "Der Rokokostil in Deutschland", and one on "Democracy in Medieval German Literature."

Mr. Spiegelberg was elected Vice President of the Society for Religious Studies at its Congress in Berkeley. He spoke twice to Palo Alto Presbyterian groups and delivered a sermon in the Stanford Memorial Church. He talked to three student groups at Stanford and lectured in San Mateo. He participated in the International Seminar at Stanford, in a symposium at the Adult Education Center in San Jose, and conducted a lecture course on Comparative Religions in Palo Alto. He read a paper to the Society for Religious Studies on "Jung's Recent Contributions to the Psychology of Religion", and one to the Theological Group in San Francisco on "Spiritual Autobiography." His publications include a signed book review, a letter in Life magazine, and a reprinting of his Bible of the World. He is at present working on a book entitled The Religion of Non-Religion.

A.E. SOKOL
Executive Head

CLASSICS

The staff consisted of Hermann Ferdinand Frankel, Hazel Dorothy Hansen, Raymond Davis Harriman, professors; Philip Whaley Harsh, associate professor; Lionel I.C. Pearson, assistant professor.

In addition to their regular work the members of the department engaged in the following activities: Mr. Frankel attended the December meeting of the American Philological Association at Rochester, New York, at which he read a paper (to be published in the Transactions of the A.P.A.) on "Man's 'ephemeros' nature according to Pindar and others." He reviewed "Parmenides: Some Comments on his Poem" by W. J. Verdenius in Classical Philology, 41 (1946) pp. 168-171. He also wrote a note on the concluding sections of Pseudo Xenophon's Constitution of the Athenians, which is to be published soon.

Miss Hansen continued to serve as a member of the Managing Committee of the American School of Classical Studies, Athens, Greece, attended two meetings in New York, in December and in May, and also served on its Committee of Placements. As secretary of the San Francisco Society of the Archaeological Institute of America, which holds quarterly meetings, she also attended the annual meeting of the Archaeological Institute of America in Rochester in December. She was chairman of the Henry Rushton Fairclough Latin Contest for Latin students in the high schools of Northern California. In June she departed for a six months' stay in Greece.

Mr. Harriman as President of the Philological Association of the Pacific Coast gave the presidential address on "The Tower of Babbble" at its annual dinner meeting in Berkeley in November. He also served as Coordinator of the Army and Navy programs.

Mr. Harsh continued to serve on the American Committee of the Association Guillaume Bude and was elected a vice-president of the Classical Society of the American Academy in Rome. His work in research was concerned with certain problems in Plautus. He published "Hamartia Again," in the Transactions of the American Philological Association 76 (1945) 47-58, which actually did not appear until 1947.

Mr. Pearson returned to the Department at the beginning of the Winter Quarter after a five years leave of absence with the British Armed Forces abroad.

RAYMOND DAVIS HARRIMAN
Executive Head

ENGLISH

The staff of the Department of English for the year 1946-47 consisted of William Hawley Davis, Henry David Gray, Albert Guérard, Arthur Garfield Kennedy, Edith Ronald Mirrieles, professors emeriti; Mary Yost, lecturer emeritus; Richard Foster Jones, John Wendell Dodds, Hubert Crouse Heffner (Dramatic Literature), Wallace Earle Stegner, James Aiken Work, professors; Robert Adger Law, acting professor; Margery Bailey, William Irvine, Francis Rarick Johnson, John McClelland, Herbert Dean Meritt, George Frank Sensabaugh, Virgil Keeble Whitaker, Arthur Ivor Winters, associate professors; Robert W. Ackerman, Alfred H. Grommon, John Lievsay (on leave)

assistant professors; Roland Blenner-Hassett, Leo Leonard Camp, Jack Elliott Fink, Newell Ford, Margaret Dille Hudson, Graham Cunningham Wilson, Phylliss Kerr Yowell, instructors; Thornton Y. Booth, Jean Marie Ryers, Justice Kent Clark, Dolly Miller Crane, Howard L. Green, Boris Ilyin, Margaret Bugnell Mathison, Lois June Mayfield, Karl G. Peterson, Barbara Jean Ringheim, Mary Gavin Riordan, Louis Percival Shepherd, Louise Shoup, Elizabeth Johnson Wolfe, acting instructors; Mary Electa Brown, Sylvia Berry Hoyt, Dorothy Landine, teaching assistants; Mabel Ferry Halbert, Eleanore Humphreys Wilson, Elizabeth Savage Gaertlin, secretaries.

Four graduate students in the department were awarded fellowships as follows: The Abraham Rosenberg Research Fellowship, Byron R. Bryant; the George Loomis Fellowship in American Literature, Gloria T. Chasson; the Doris Clayburgh Steiner Fellowship, shared equally between Marlies Kallmann and Edgar M. Glenn.

Twenty-three candidates were awarded the Bachelor of Arts Degree during the year.

The Degree of Master of Arts was received by Byron R. Bryant, presenting a thesis entitled "The Viewpoint of the Southern Aristocracy as Reflected in the Fiction of William Gilmore Simms." Mr. James S. Diemer also received the degree of Master of Arts.

Mr. John E. Covey, III won the Clarence Urry Award for Verse.

Publications by members of the Department of English may be found under the heading of "Publications of the Faculty."

Under the supervision of the Executive Head of the English Department, Dr. Richard F. Jones, two new undergraduate majors, with appropriate programs, became effective at the beginning of the year: one in American Literature and one in Creative Writing. The enrolment in the latter exceeded all expectations, and in the hands of the very competent departmental Committee on Creative Writing the program developed rapidly. Its success was further assured by the generosity of Dr. Edward H. Jones of San Angelo, Texas, who pledged seventy-five thousand dollars to establish for five years, six fellowships worth \$2000 each, to be called the Stanford Fellowships in Creative Writing, and four prizes worth five hundred dollars each: the Edith Merrieles prize in the Short Story, the Wallace Stegner prize in the Novel, the Margery Bailey prize in the Drama, and the Ivor Winters prize in Poetry.

During the year the Executive Head served on the Publications Committee, the Scholarship Committee, and the Committee on Teacher Training, and he was also president of the Research Club. He served on the Nominating Committee of the Modern Language Association of America, was elected to the Executive Council in December, and attended meetings of the Council at Washington, D.C., in December, and at New York in April. In March he delivered lectures at the University of Texas, the North Texas State Teachers College, and before the Texas Conference of College Teachers of English at Fort Worth. He read a paper before the Philological Association of Stanford University. He attended a meeting of the Philological Association of the Pacific Coast at Berkeley, at which he was elected vice-president of the Association.

Mr. Robert W. Ackerman, who joined the staff of the English

Department in the autumn of 1946, has been teaching courses in Medieval literature and creative writing.

Mr. Johnson attended the meeting of the Modern Language Association in December, at which he read a paper before the Bibliographical Evidence Group on "Printers' 'Copy Books' and the Black Market in the Elizabethan Trade." At the meeting he was elected Secretary of Group English IV (The Period of Spenser), and also Secretary of General Topics VIII (Bibliographical Evidence). For 1947 he is Chairman of the Advisory and Nominating Committee of English VI (The Period of Milton), and continues as a member of the Bibliographical Committee of General Topics VII (The Relations of Literature and Science). Throughout the year he served as Associate Editor of *Isis*, the official journal of the History of Science Society, and in December was elected to the Executive Council of that Society.

Mr. Johnson read a paper on "The Poetic Use of the Ideas of Renaissance Astronomy in the Plays of Christopher Marlowe" before the History of Science Club at Berkeley in January, attended the conference on the Humanities and Anthropology held at Santa Barbara in May, and participated in the conference on Renaissance studies which was held in June at the Huntington Library at the invitation of the Pacific Coast Committee on the Humanities of the American Council of Learned Societies. Part of the summer he spent at the Huntington Library continuing his research on English prose literature of the Renaissance. He was President of the Stanford Philological Association for the year 1946-47, and also President of the College English Association of the Bay Area.

Mr. Irvine, during the academic year 1946-47, gave a paper on "Shaw's Criticism of Shakespeare" at the meeting of the Modern Language Association in December, and served in the Victorian Section as member of the Bibliographical and Nominating Committees and as Chairman of the Program Committee. He also delivered a lecture on "Shaw and Russia" at the University of Wisconsin in April. He completed for the press a biography of Shaw and published several articles.

Mr. Meritt read a paper at the Modern Language Association meeting in Washington on "Light on Some Dark Words". During the summer of 1947, Mr. Meritt was Frederick Ives Carpenter Visiting Professor at the University of Chicago.

Mr. Sensabaugh attended the meeting of the Modern Language Association in Washington D.C., on December 28, 29 and 30. He served as Secretary of English VI: The Period of Milton; and was elected chairman of this group for 1947. He also continued his duties as Chairman of the Committee to Study English Curricula in the California Educational System. The Committee prepared for publication a fifth report, which will appear in the autumn issue of *The Educational Forum*. He served as Faculty Representative for the Alumni Conferences held at Portland, Seattle, Los Angeles, and on the Stanford campus. He also served as Chairman of the Commencement Committee, and was appointed to membership on the Committee for Exceptional Students. Mr. Sensabaugh spoke on How to Write before the Northern California Nurses' Association. He was asked to serve on the Advisory Board for the meeting of the

National Council of Teachers of English in San Francisco.

During the summer of 1947, Mr. Sensabaugh taught at the University of Texas in the Second Summer Term.

During the academic year 1946-47 Mr. Wallace Stegner offered courses in the criticism of fiction and in advanced fiction writing, besides one in *The Rise of Realism in the American Novel*.

During this time the Creative Writing program developed, as outlined in Mr. Jones' report, with the establishment of fellowships and prizes through the generosity of Dr. E. H. Jones. In April, the first volume of *Stanford Short Stories* was published, selected by the advanced fiction class as the best stories written on the campus during the year. In August, the first five Creative Writing Fellows, Mr. Ilyin, Mr. Sellers, Mr. Cadle, Mr. Olson, and Mr. Young, were selected.

Mr. Stegner's public addresses were confined to a paper before the Faculty Research Club of Stanford University, and participation in a three-day conference on writing at Pomona College in December, 1946. Mr. Stegner served throughout the year as one of the board of editors of *The Pacific Spectator*.

Mr. Whitaker participated in the Conference on the Humanities and Anthropology held under the auspices of the School of Humanities at Santa Barbara, May 16 and 17. He also participated in the Conference on Renaissance Studies on the West Coast held under the auspices of the American Council of Learned Societies at the Huntington Library on June 9. Mr. Whitaker read a paper, entitled "*Reminiscence and Innovation in Shakespeare's Thought*," before the Philological Society of the University of Chicago on August 22. He lectured twice to the School of Naval Administration at Stanford University on Indian Service Administration. He spent the winter quarter in New York continuing work on a projected book on Shakespeare's use of his sources.

Mr. Work, in addition to his activities in the Department of English, served as a member of the Program Committee of the School of Humanities, and during the summer quarter, as Acting Dean of the School. During the year he filled several speaking engagements including an address on the "*Functions of Poetry*," delivered before the Century Club of San Francisco, and a paper on *Swift and Sterne* read before the Philological Association of Stanford. He attended the Santa Barbara Conference on "*Anthropology and the Humanities*"; served as Secretary-Treasurer of the Stanford Chapter of the American Association of University Professors, and spent the spring quarter working at the Huntington Library on his edition of Henry Fielding's *Tom Jones*.

Under the direction of a committee composed of Mr. Meritt, Mr. Winters, and Mr. Work (Chairman), the department continued during the autumn and winter quarters, its series of Tuesday afternoon "*Readings of Poetry by Members of the Department*." These Readings, which were held six times each quarter, in the newly re-finished William Dinsmore Briggs Room, attracted a total attendance during the two quarters of 634 persons.

RICHARD FOSTER JONES
Executive Head

GERMANIC LANGUAGES

Staff. Bayard Quincy Morgan, Professor and Executive Head; Friedrich Wilhelm Strothmann, Professor; Kurt Frank Reinhardt, Anthony Eugene Sokol, associate professors; Henry Blauth, Hughes Brewster, Helen Emerson, Mrs. Stephanie Lombardi, Mrs. Rita Spiecker, Mary Williams, instructors; Mrs. Hildegard Boeninger, Gunther Bonnin, Samson Knoll (winter quarter), Daniel McCluney, Arthur Watkins, acting instructors; Joan Arnold (till March), Mrs. Eva L. Hastings (till May), Mrs. Ruth B. Schroeder, secretaries.

Teaching and enrollments. The trends indicated in our last report continued on into the present year and resulted in even larger attendance figures in this department, requiring us to maintain a staff which was only exceeded under the AST Program. Our autumn quarter enrollment was larger than that of any year but one in the history of the department, and the summer quarter overtopped in attendance all previous years except 1943, when army courses swelled our total.

Students and teachers continue to approve of the intensive approach to a reading mastery which we have long employed, based on the "German Reading Grammar" of Sharp and Strothmann for the work of the first year, and "Reading German" by Morgan and Strothmann for the work of the second year.

One particular effect of the war has become disturbingly prominent in our work and called for remedial measures. This is the fact that many of our entering students have either been long out of school or have had to discontinue their German studies. Frequently such students do not have the language mastery which corresponds to their credit status. For cases of this kind the department set up a no-credit coaching course, conducted by Mr. Blauth, which has proved extremely helpful in enabling students either to make up deficiencies or to supplement the instruction in the regular classes.

Similarly helpful is the instruction offered in our courses B91 and C181, in which this department has been something of a pioneer. These courses enable us to offer individual students a variety of work which far exceeds the offerings in our regular curriculum. This is a service which is greatly appreciated by students and by other departments, especially the sciences.

During the summer quarter Professor Morgan conducted a "rapid section" of beginning German, with the avowed object of completing the work normally done in two quarters of the first-year course. Students who finish this course will be able to enter German B3 (third quarter) in September.

Degrees. The degree of B.A. was conferred in June on Mary Jane Skillman and Carolyn Sue Wakefield.

Public Lecture. On July 16, 1947, Professor Robert T. Clark, Jr., of the University of Texas, currently visiting lecturer at the University of California at Berkeley, lectured on the poet Rilke in the Faculty Women's Clubhouse. The lecture was well attended and favorably received. In the evening Professor Clark and his wife were introduced to members of the faculty at the home of Professor Morgan. Professor Clark gave pleasure by

singing a number of German songs.

Projects in Process. Under this heading are listed from year to year extra-curricular activities of staff members of scholarly or professional character.

Professor Morgan: (1) continues as associate editor for foreign languages of the California Journal of Secondary Education; (2) has nearly completed editorial work on two investigations of Anglo-German literary relations done at the University of Wisconsin and now to be prepared for publication; (3) is making original translations for an anthology of German literature to be published in collaboration with Professor Victor Lange of Cornell University; (4) is collaborating with Professor Strothmann in an editing project, see below; (5) is collaborating with Professor Strothmann in an investigation corollary to the preceding project, see below; (6) is collaborating with Professor Strothmann on a textbook, see below; (7) is serving as chairman of a sub-committee which is preparing a report on the high-school course in German intended to improve the correlation between high school and college in that subject.

Professor Reinhardt's history of German Civilization ("Germany 2000 Years") is ready for print but has been held up by postwar shortages. He is currently at work on a new book to be entitled "The Crisis of Human Existence."

Professor Strothmann: (1) is continuing his translation of parts of the "Summa Theologica" of Thomas Aquinas in collaboration with Professor J. G. Hagerty; (2) has completed in collaboration with Professor Morgan a critical edition with glossaries of a unique 14th century MS containing a Middle High German translation of extensive portions of Thomas Aquinas's "Summa Theologica" and some other matter; this is now in the hands of the Stanford Press; (3) is preparing in collaboration with Professor Morgan a monograph which will exploit the lexicographical, syntactical, and semantic discoveries made during the preparation of the MS just mentioned; (4) is at work in collaboration with Professor Morgan on a second-year German reader similar to "Reading German" by the same authors.

Notes and Personals. Since the beginning of the year the department has been sending one CARE-package per month to one of the many German poets and writers who are reported as being in need of such help. Several of the beneficiaries have replied in gratitude and appreciation. In addition, a generous donation to Professor Reinhardt has enabled him to send a large number of such packages to necessitous and deserving German intellectuals.

Professor Morgan continues to place in the Stanford Library typescripts, for student and faculty use, of his original translations from the German; the latest accessions are Hofmannsthal, "Death and the Fool," and Kaiser, "The Citizens of Calais." In October he read a paper on "Space in Speech" before the Stanford Philological Society, and in May he read a revision of the same paper before the Philological Association of the Pacific Coast at Berkeley. He writes numerous signed reviews for Books Abroad and other periodicals.

Professor Reinhardt lectured in the Extension Division of the University of California on "The Main Problems of Philosophy" (autumn semester) and on "Kierkegaard, Ibsen, Nietzsche, Spengler,

Maritain, and the Modern Crisis" (spring semester); he also delivered the Annual Aquinas Lecture at the College of the Holy Names in Oakland (spring, 1947). He contributes signed reviews to Books Abroad and The Americas.

BAYARD QUINCY MORGAN
Executive Head

MUSIC

Staff. William Loran Crosten, associate professor of music and executive head of the department; Warren D. Allen, University organist and professor of music and education (on leave autumn, winter and spring quarters); Herbert Jan Popper, associate professor of music (acting executive head, summer quarter); Neil M. Daniels, acting assistant professor of music and education (summer quarter); D. Sterling Wheelwright, acting organist and instructor; Joel J. Carter, acting instructor; Russell V. Morgan, lecturer in music and education (summer quarter); Mack Evans, chorus director; Julius Shuchat, band director; James Schwabacher, Jr., assistant in instruction.

New Quarters of the Music Department: In September, 1946, the Department of Music was moved from its former home in the basement of Memorial Church to more adequate quarters on the first and second floors of The Knoll.

Equipment: A survey revealed that a number of large pieces of equipment would be needed if the department were to do its work properly. During the course of the year, then, the facilities were increased by the addition of one Steinway grand piano, two upright pianos, one large radio-phonograph combination, and three earphone model phonographs.

Curriculum: In September, 1946, the Music Division was formally designated as a department. Normally a change of that kind implies that a major program is being inaugurated; but in this case it was felt that such a course was not immediately possible. Certain staff inadequacies plus a grave lack of essential library materials supported the view that a more modest program was wiser for the current year. Hence, with the exception that basic work in the theory of music was instituted, the previous curriculum was not radically altered. On the assumption, however, that the deficiencies both in personnel and in equipment would be remedied in the near future, a thorough study was made of the curriculum problem. The results were embodied in a major program of music study which was published in the 1947-48 Announcement of Courses.

Music in the School of Humanities: Pending the institution of a major course of study in music, the concentration in the subject previously sanctioned by the School of Humanities was continued for those five students originally registered under the plan. However, no new enrollments of this kind were permitted.

<u>Enrollment:</u>			
Autumn Quarter:	10 Courses offered.	Students	255
	5 Musical organizations.	Students	<u>236</u>
	Total Autumn Quarter		491
Winter Quarter:	9 Courses offered.	Students	293
	6 Musical organizations.	Students	<u>250</u>
	Total Winter Quarter		543
Spring Quarter:	9 Courses offered.	Students	271
	5 Musical organizations.	Students	<u>297</u>
	Total Spring Quarter		568
Summer Quarter:	11 Courses offered.	Students	150
	2 Musical organizations.	Students	<u>41</u>
	Total Summer Quarter		191
Total enrollment academic year 1946-47			<u>1793</u>

Seventeen students pursued graduate work in music education, four of whom received the degree of Master of Arts.

Musical Organizations:

1. University Choir. Continuing its excellent work of the past, the University Choir of approximately fifty voices under the direction of D. Sterling Wheelwright sang for all services in the Memorial Church.

2. University Chorus. To afford students further opportunity for group singing; a mixed chorus distinct from the University Choir was organized this year under the direction of Mack Evans, formerly of the University of Chicago. Emphasis here was placed upon the study of secular music. Starting with forty singers, the organization grew during the course of the year to a membership of one hundred twenty-five. In addition to concert performances the group toured the campus and the town before the Christmas holidays singing carols.

3. University Singers. Organized as a small chamber group numbering from twelve to fourteen members selected by audition, the University Singers devoted themselves to the study of the more intimate type of vocal ensemble music.

4. University Band. For the first time since the war, it was possible to organize a fully representative band with approximately eighty players. During the football season membership was restricted to men, but at its conclusion a concert band was formed and women were allowed to participate.

5. University Orchestra. As always, the orchestra presented the greatest recruiting problem due to the perennial scarcity of players on the more unusual instruments. However, under the leadership of Jan Popper a creditable ensemble of about fifty members was formed.

Concerts Presented:

November 19. Chorus and Orchestra presented a program on the Tuesday Evening Series.

December 8. A service of Christmas music was presented in Memorial Church by the Choir, the Chorus, a brass ensemble recruited from the Band and soloists.

May 6, 7 and 8. In cooperation with the Department of Speech and Drama, Weber's opera "Der Freischutz" was presented three times to capacity audiences. This work, of course, brought into play the University Chorus and Orchestra. Two of the leading roles were

sung by professional artists not connected with Stanford, but it is noteworthy that all the remaining solo parts were taken by staff members or students.

April 15 to May 9. As a demonstration of the varied musical activities of the department, a festival of five programs was under taken. These were as follows:

April 15. A concert of chamber music including sonatas for piano and violin played by William L. Crosten, pianist, and Arnold Small, violinist, and vocal music presented by the University Singers. This concert was presented on the Tuesday Evening Series.

April 20. A program in Memorial Church given by the University Choir and Richard Purvis, guest organist.

April 27. A joint concert by the University Chorus and Orchestra which included the West Coast premiere of Vaughan Williams "The Shepherds of the Delectable Mountains."

May 4. A program given in Frost Amphitheater on Sunday afternoon by the University Band.

May 9. A performance of Mozart's opera "Cosi Fan Tutte" by the Intimate Opera Players.

August 15. A program of concertos given in Cubberley Auditorium by the University Chamber Orchestra with the assistance of the following guest artists: Adolph Baller, pianist; Gabor Rejto, 'cellist; Roman Totenberg, violinist; and Frances Fisher, flutist.

Organ Recitals: The series of Thursday afternoon organ recitals was continued throughout the year. Programs were played by D. Sterling Wheelwright and Warren D. Allen of the faculty and by Walter Wilcox and Frederick C. Kintzer, graduate students in music and education.

Other Public Activities: As always, the Department was called upon frequently to furnish music for various group meetings, student assemblies, rallies, radio programs, drama productions, etc.

Choir Festival: On May 5, the Department acted as host to the annual Northern California Junior College Choral Festival. Eight schools sent singing organizations to the meeting. Following the performances and conferences in the afternoon, the Stanford Music Department presented an evening program in Cubberley Auditorium demonstrating various phases of the University's work in music.

Music at Home: At the invitation of President Tresidder, programs of both live and recorded music were presented in his home regularly on Wednesday evening under the direction of James Schwabacher, Jr.

The Friends of Music at Stanford continued their admirable support of chamber music in the community by presenting during the year a series of concerts.

Faculty Activities: William L. Crosten spoke in January at the annual meeting of the California Music Teachers Association on "The Study of Music in a Liberal Arts College." On April 18 and 19, he served as adjudicator at the central California music festival held in Fresno. On May 16 and 17, he attended the Stanford Humanities-Anthropological Conference held in Santa Barbara.

Warren D. Allen, on leave for the first three quarters, was engaged as guest professor of musicology at the University of Texas. In January he attended a meeting of the Music Committee for the Graduate Record Examination, sponsored by the Carnegie

Foundation, in New York City; in February he attended the Annual Meeting of the Music Teachers National Association in St. Louis, where he read a paper on "A New Vista in Music and Philosophy," and presided at a meeting devoted to "Audio-Visual Aids." He gave an organ recital at Earlham College, Richmond, Indiana, on April first, and read two papers for the Texas Chapter of the American Musicological Society in November at the University of Texas, and in April at North Texas State College at Denton.

Jan Popper organized and directed the Intimate Opera Players, a professional company which played engagements in several California cities. In addition, he made numerous concert appearances throughout the area as pianist and accompanist.

D. Sterling Wheelwright attended in February the annual meeting of the Music Teachers National Association in St. Louis where he read a paper on "Music in the Humanities." In March he attended the meetings of the California-Western division of the Music Educators National Conference.

Joel J. Carter continued his graduate work in the School of Education and made frequent appearances in concert.

WILLIAM L. CROSTEN
Executive Head

PHILOSOPHY

The staff of the department for the academic year consisted of the following: John Robert Reid, associate professor; John Leland Mothershead, Jr., associate professor; Robert M. P. Grinnell, assistant professor of humanities and philosophy; Jeffery Smith, assistant professor of humanities and philosophy; and Edwin Garlan, acting assistant professor of philosophy in the summer quarter.

During the year we felt that unusually great interest was manifested in philosophy. This was indicated in various ways: by our discussions with students, by their activities in the Philosophy Club they formed, by the demand for "individual work" with students, and by the large enrollment in courses.

Mr. Mothershead made valuable contributions, as usual, to our departmental activities, not only through teaching, but in advising of students. In addition to work on important committees, he has found time to carry on researches in moral philosophy.

Mr. Smith attended the annual meeting of the Pacific Division of the American Philosophical Association at Eugene, Oregon, where he read a paper on "The Teaching of Philosophy"; he was a member of the Stanford Humanities-Anthropology Conference at Santa Barbara, which he addressed on the subject of "Cultural Differences"; he talked to the members of the Pacific Coast Division of the American Society for Aesthetics on "Art and Reality"; and he had published a paper on "Assignment for Life" in the Educational Forum.

Mr. Reid read a paper entitled "A Philosophical Interpretation of Psychosomatic Relations" before the Philosophy Club of the University of California; he attended the Stanford Humanities-

Anthropology Conference, speaking on the subject, "Personality and Culture"; and he had published his address, the second David Wight Prall Memorial Lecture, on "How Ought We to Talk About Values?". In connection with studies, looking forward to writing and teaching in the philosophy of medicine, with special reference to psychiatry Mr. Reid asked Dr. Milton Rose, research associate in psychology and medicine, to collaborate with him in giving a seminar on the Theory of Mind. The course aroused enough interest in students from various departments to suggest the desirability, whenever feasible, of supporting this and similar kinds of collaboration between philosophy and medicine—or philosophy and law, philosophy and education, and so on.

During the summer Mr. Edwin Garlan from Reed College was a member of our teaching staff. Mr. Garlan's special background in law and social philosophy has been highly valued by his students and others who have discussed with him problems in these areas.

Unfortunately Mr. Robert Grinnell resigned from his position at Stanford in order to accept a position at the University of California. We are sorry to lose him, and we offer him our best wishes for his success at Berkeley.

The members of our department welcome the appointment of Mr. Lawrence W. Kimpton, the new Dean of Students, as professor of philosophy and of Mr. Henry G. Bugbee as assistant professor of philosophy.

JOHN R. REID
Acting Executive Head

ROMANIC LANGUAGES

The regular teaching staff consisted of Aurelio Macedonio Espinosa, Sr., Frederick Anderson, Georges Edouard Lemaitre, Stanley Astredo Smith, professors; Ronald Hilton, Juan Bautista Rael, William Leonard Schwartz, associate professors; Aurelio Macedonio Espinosa, Jr., Alexander E. A. Naughton, assistant professors; Benjamin F. Culler, Grace Knopp, Robert Hawkins Poole, Roberto Benaglia Sangiorgi, instructors; Julia Antoinette Bramlage, Lawton B. Kline, Felix Legrand, acting instructors.

The following graduate students served as teaching assistants for one or more quarters: Maria Julieta del Castillo, Anita M. Dubowy, Terry Hansen, Ronald Kaufman, Ernest O. Lombardi, Francisco Xavier Maggipinto, Umberto Olivieri, Thelma Richmond, Jessie E. Smith, Joseph W. Stanley, George B. Taylor, John P. Wonder.

Sixteen departmental majors, eleven in Spanish and five in French, received the degree of Bachelor of Arts.

Six students received the degree of Master of Arts and presented theses as follows: Vernon Earnest Raymond Berry, "Religion and the Traditional Spanish Ballads"; Laurence Cecil Boydston, "Classification and Analysis of the Spanish-American Versions of the Tar-baby Story"; Donald Clinton Cox, "Contemporary Criticism and Satire on *Don Quixote*"; Anthony Richard Mattos, "The Probable Sources of Gil Vicente's *Don Duardos*"; Marjorie Frances Tully, "An Annotated Bibliography of Spanish Folklore in New Mexico"; Margaret Susanne

Wilson, "The Modern Miracle Plays of Henri Gheon, Especially His Le Pauvre sous l'escalier, 1921".

The degree of Doctor of Philosophy was received by three students, who presented theses as follows: Besse Alberta Clement, "The Ideas of Duhamel on Contemporary Civilization"; Mary Teresa Derham, "The Calvary Scene in the French Mysteries: Its Origin, Development, Significance"; George Elbert McSpadden, "The Spanish Prologue before 1700".

Mr. Anderson has continued to work on his book entitled Reason and Relativity, which he expects to finish during the Autumn Quarter.

Mr. Espinosa, who retired last year, was recalled to serve an additional year as Executive Head of the Department, and to teach one seminar for graduate students each quarter. His extracurricular activities during the year were the following:

Directing the publication of the three volumes of his Cuentos populares españoles, which have just been published in Spain by the Consejo Superior de Investigaciones Científicas, Madrid, 1946-47. The first volume, containing the text of the Cuentos, is a reprint of the three volumes published by the Stanford University Press in 1923-26; volumes II and III consist of the comparative notes (Notas Comparativas), an analysis and comparative study of the tales of Volume I, with a classification of all the types and subtypes, thus constituting a major contribution to the comparative study of European folktales.

The preparation for publication of a revised and enlarged edition of his Romancero Nuevomexicano, first published in 1915.

The preparation of an article entitled Spanish and Spanish-American Folklore, for the Folklore Dictionary to be published by Funk and Wagnalls.

He continued to serve as General Editor, in charge of Spanish textbooks, for the Oxford University Press.

During the year Mr. Espinosa gave several lectures, on Spanish language, literature and cultural history, in San Francisco, Palo Alto and San José.

During the year 1946, Mr. Espinosa, Jr. served on the Committee on Research in Folklore of the American Folklore Society, and contributed a section dealing with Spanish-American folklore to a report prepared by this committee.

He has continued to serve, also, as an Associate Editor of Hispania, the organ of the American Association of Teachers of Spanish, and prepares reviews of current philological and literary journals from Spain for this periodical.

Mr. Espinosa, Jr. drew up a program of intensive study in Portuguese for the Military Intelligence School situated at the Presidio of Monterey, California.

He has continued the preparation for publication of his Cuentos populares castellanos (five hundred versions of Castilian folktales gathered in Spain in 1936), a section of which was published during the present year by Espasa-Calpe, Buenos Aires, Argentina.

Mr. Hilton took part during the year in several conferences, including the Riverside conference on international affairs and the Santa Barbara conference on the relations between anthropology and the humanities.

The organization of Who's Who in Latin America, of which Mr.

Hilton is editor, was strengthened by the creation of a National Advisory Committee consisting of twenty-four North Americans well known in the field of Latin American studies. Part IV of the publication (Bolivia, Chile and Peru) appeared during the year, and other parts are in preparation.

Mr. Lemaitre has devoted most of his time aside from teaching to the preparation of a History of French Civilization, a work for which he has been collecting materials for several years. His Biography of Victor Hugo has been finished and is ready for publication.

During the year Mr. Lemaitre gave lectures on contemporary French literature and art to the Art Club of Mill Valley, at the San Francisco Museum of Art, and at the University of California.

Mr. Rael has been working during the year on a complete revision of his New Mexico folktales, some of which have been published in the Journal of American Folklore, for publication in Mexico, with abundant comparative notes. It will be the largest and best collection of Spanish-American folktales thus far collected.

Mr. Rael is preparing a school edition of La Parcela, a novel by the Mexican writer López Portillo y Rojas.

During the year Mr. Rael served as chairman of the State Subcommittee for the Evaluation and Re-numbering of High School and College Language Courses. He also gave addresses on Mexico to various civic organizations of the Bay Region.

During the summer Mr. Rael conducted two educational tours through Mexico.

Mr. Sangiorgi and Miss Grace Knopp have been preparing for publication during the year a school edition of La Ciudad de los Césares, a novel by the Chilean writer Manuel Rojas.

FREDERICK ANDERSON
Acting Executive Head

SPEECH AND DRAMA

Staff. The staff consisted of Lee Emerson Bassett, professor emeritus; Elisabeth Lee Buckingham, associate professor emeritus; Hubert Crouse Heffner, professor of dramatic literature and executive head of the department, Virgil Antrix Anderson, professor; Leland Taylor Chapin, James Gordon Emerson, F. Cowles Strickland, H. Donald Winbigler, associate professors; Alexander Nicholas Vardac, acting associate professor; D. Paul McKelvey, assistant professor; Helene Blattner, Hayes A. Newby, acting assistant professors; Herbert Jan Popper, assistant professor of music and director of opera workshop; John V. Zuckerman, director of radio workshop and audio-visual aids program; Wendell Cole, Muriel Lievsay (on leave), William D. Lucas, Norman Philbrick, Harold W. Ross, Helen W. Schrader, instructors; James H. McCulloch, Virginia Opsvig Kerr, acting instructors; David S. Hawes, Lucie Lawson, Hazel Glaister Robertson, lecturers; Richard Bertrandias, Harry Bubeck, Alfred W. Crapsey, John W. Elwood, Anthony Freeman, John B. Grover, Don Hall, Herbert Heyde, Marjorie McGilvrey, Dwight Newton, Inez G. Richardson, James W. Walters, Hal Wolf,

John V. Zuckerman, lecturers in the radio institute, summer quarter; Richard Hale, Margaret Wycherley, senior artists-in-residence, autumn quarter; Beatrice Manley, Jack H. Neeson, Willard Schurz, John Walker Vaughan, William Vorenberg, junior artists-in-residence, winter, spring and summer quarters; Courtenay Perren Brooks, Marion Gaber, Leola Horowitz, Marnetta Jones, Morris Val Jones, Paula Kanner Athey, Anne Nelson, Dorothy-Jane Molyneaux, Milton Valentine, James Walters, Helen Ann Willey, teaching assistants; Julio Francescutti, Walter Krumm, technical assistants.

Degrees and Credentials

During the year, a total of 95 students pursued graduate work in the department. One candidate completed the work for the doctorate, and four candidates completed the work for the Master of Arts degree. One hundred and thirty-four individual speech tests were given to candidates for teachers' credentials by Dr. Paul McKelvey. Following his test, each candidate received in private conference, a detailed analysis of his skills in speaking and reading as evidenced in the test, as well as individual help and guidance.

This year, as in former years, the department (in conjunction with the School of Education) offered work leading to a special credential in the correction of speech defects under the direction of Dr. Virgil Anderson. During the year eight candidates completed this program, and were recommended for this credential.

Under the supervision of Miss Helen Schrader twenty students majoring in Speech and Drama were enrolled in the teacher training program. Ten of those enrolled, completed the requirements for the general secondary credential. It is worthy of note that the majority of the credential candidates in the field of Speech and Drama are graduate students working for advanced degrees. Seven of the credential candidates are working toward the Master of Arts in the School of Education, and six of the candidates are working toward the Master of Arts in the School of Humanities. In addition to these major candidates, in the field of Speech and Drama, seven students elected this field as their teaching minor.

Those candidates completing advanced degrees along with their thesis and dissertation titles were as follows:

Doctor of Philosophy

James Harvey Clancy:

"The Humorists: An Elizabethan Method of Characterization as Modified by Etherege and Congreve."

Master of Arts Degree

Robert William Albright:

"A Comparison of Good Speakers with Poor Speakers on a Series of Neuromuscular Tests."

Annabel Anderson:

"Plot Progression in the Plays of Eugene O'Neill."

Marnetta Martha Jones:

"The Relationship of Certain Personality Traits to Stage Fright."

Marion Marie Chantry Kramer:

"A Critical Examination of Studies on Physiological Aspects of Stuttering."

The registration by quarters was as follows:

	Graduates	Under- graduates	Speech Majors	Total Registration
Autumn	50	698	48	748
Winter	42	692	41	734
Spring	60	690	62	755
Summer	51	305	20	356

Speech Clinic. The Speech Clinic, under the direction of Dr. Virgil Anderson, reported total registration for the year as follows:

	Cases	Clinicians
Autumn	33	10
Winter	50	19
Spring	48	14
Summer	24	8
Totals	155	51

Total individuals treated in the clinic97

Total students trained as clinicians.23

Of the total cases treated during the year, thirty-nine, or 40 per cent, remained in the clinic for more than one quarter, twenty-seven remaining two quarters, eleven receiving treatment for three quarters, and one attending throughout the four quarters. Five cases were adults from outside the university, eighteen were children ranging in age from pre-school through junior high school, four were of high-school age, and two were from the faculty or were connected with the faculty. The rest of the clinic membership consisted of Stanford students.

The total of 155 registrations reported for the year is the largest enrollment the clinic has ever had, exceeding by fifteen last year's peak enrollment. This represents a larger actual growth than these data indicate, since, in contrast with previous years, very few foreign students were accepted in the clinic this year. Previously this group had accounted for a rather substantial block of clinic registration, but, beginning with this year, the foreign students are being trained in the special courses set up for that purpose in the Departments of English and Speech and Drama. While the total number of student clinicians was slightly smaller than in the previous year, each student received a longer period of training in clinical work.

Reference is made to the statements in last year's report relative to the two groups of increasing importance, so far as demands for clinic services are concerned. The first of these groups consists of children, largely from the pre-school and lower elementary age ranges. The number of requests for services from this group and their importance in a clinic training program has led to the decision to establish one or more children's classes in speech correction beginning with the fall quarter, provided adequate facilities can be set up by that time. A nominal charge will be made for these classes sufficient to purchase equipment and pay clinical assistants when that is desirable or necessary. As a matter of fact, one such class is being conducted on a trial basis during the present summer term, although no charge is being made for the service.

The second of the two groups referred to above — adults from

outside the University — were taken care of during this past year through a special experiment which the clinic set up in what was termed Speech Psychodrama, an adaptation for purposes of speech and personality training of the psychodrama techniques as developed by Dr. Moreno. Beginning in November and continuing through the winter and spring quarters, the group met once each week in the evening in the social room of the Education building. The program, under the general supervision of the Speech Clinic Director, was the immediate responsibility of a committee of four graduate students in speech correction, one of whom, (the chairman) was in training as a clinical psychologist, and two others of whom had taken work in psychodrama at Stanford under a pupil of Dr. Moreno's. Attendance at the psychodrama sessions was made up of the committee members, observers and helpers from the speech correction classes, and Stanford students and adults from outside the University who were coming for help with their speech and personality problems.

Results of the experiment were most gratifying. Attendance during the winter and spring quarters averaged between twenty and twenty-five at each meeting, some twelve to fifteen of whom were "patients," the remainder being observers and clinicians. Marked improvement was observed in the speech of several of the more severe speech defectives (mostly stutterers) and several of the "patients" made substantial improvement in such categories as overcoming fear and stage-fright, the development of poise and self-assurance, and the cultivation of qualities of "extroversion" and social adequacy.

There are at present between fifteen and twenty students working for advanced degrees in speech correction, about half of whom are candidates for the Ph.D. with a major or a minor in this field. This year the clinic has been assigned new quarters on the second floor of the B.A.C. building. As a result of the reputation which the speech correction program at Stanford has made for itself, the Speech Clinic was asked to submit a bid for a contract with the Veterans Administration to furnish services in speech rehabilitation, speech reading, the testing of hearing, and the fitting of hearing aids to veterans needing this type of service in the Northern California area. Such a contract will make possible a still further extension of the service and training program in speech correction at Stanford. There is every reason to believe that, properly supported, it will continue to grow and develop in the future.

Theatre and Drama. The Stanford Players, the producing organization of the Department of Speech and Drama whose productions and performances offer the practical laboratory training to students enrolled in theatre and drama courses, presented during the year 13 productions for a total of 41 performances, including seven in the large theatre and 6 in the Little Theatre. There were a total of 954 participants in these performances, which were presented before a total audience of 23,189 persons. In the Memorial Hall Auditorium performances were witnessed by 19,249 persons; in the Little Theatre 3,938 persons saw performances.

The Stanford Players organization is charged with the responsibility of presenting plays for the general public in such a way as

to serve the training program of those students who are studying the theatre, and to bring to all the students of the university a significant program of living theatre. To accomplish these two aims the Stanford Players divided their work into two distinct programs: the subscription series which is designed to include the finest possible productions of significant dramas, and the Studio Theatre series which is planned to give to the students the best training in all phases of theatre work. Inevitably both programs contribute to the achievement of both aims.

The regular subscription series offered by the Stanford Players was in this year cut from six to four productions. Three additional plays (to be mentioned later) were presented during the summer quarter. All major productions were presented in Memorial Auditorium, which made it possible to raise the limit on the number of subscriptions which could be sold. In 1945-46 subscriptions had been limited to 800; in 1946-47 the limit was raised to 2100. Actually 2050 subscriptions were sold.

The eagerness of the theatre-goers of the University Community and of the entire Peninsula to subscribe to the program of the Stanford Players gives to the staff of the Players great satisfaction, and the size of the audiences indicates that this part of the program is appreciated by those for whom it is designed. *MACBETH*, featuring senior artists-in-residence Margaret Wycherly and Richard Hale, was seen by a total audience of 4659; *THE ROYAL FAMILY* by Ferber and Kaufman was seen by a total audience of 3066; the annual opera, *DER FREISCHUTZ* by von Weber, was seen by a total audience of 4650; and *THE DEVIL'S DISCIPLE* by Shaw was seen by a total audience of 3111.

Shakespeare's *MACBETH*, directed by F. Cowles Strickland, designed by Wendell Cole, and costumed by Virginia Opsvig, was the play selected for the continuation of our plan of bringing to the campus distinguished artists of the professional theatre so that our audiences may have the benefit of more mature performances, and our students the benefits of working with established artists. Mr. Hale, who had been a senior artist-in-residence at Stanford in 1944, gave a thoughtful and stirring performance of the title role. Miss Wycherly gave a supporting performance of Lady Macbeth, but her work was not seen to best advantage because of the large size of Memorial Auditorium. Both artists gave generously of their time in assisting individual students who were members of the cast, and Miss Wycherly gave individual instruction to several students who were not fortunate enough to be cast in *MACBETH*. The staff believes that once again the plan of bringing accomplished actors to the campus to work with students has proved itself an excellent method of instruction. The salaries of the senior artists-in-residence were paid from the box office receipts of *MACBETH*.

THE ROYAL FAMILY and *THE DEVIL'S DISCIPLE* (the former directed by F. Cowles Strickland and the latter by Norman Philbrick) were all-student productions and both were well received by our audiences.

The annual opera, presented by the combined forces of the Music Department and the Stanford Players, was *DER FREISCHUTZ* by Carl Maria von Weber. The musical director was Herbert Jan Popper, the stage director F. Cowles Strickland. As in other

years, it was found necessary to augment the student orchestra by employing the services of a few musicians. One soloist, Miss Dorothy Warenskjold, was engaged to sing a leading role. Joel Carter and James Schwabacher of the Music Department gave excellent performances in important roles, and several singers from the community contributed their services. The opera received great critical acclaim and was enjoyed by the largest audiences ever to attend a Stanford Players production. For the first time, the profits of the opera were divided between the Stanford Players and the Music Department, the latter receiving \$580.00 after the final accounting.

The Studio Theatre was established to give more experience to advanced students of directing, designing, costuming, lighting, and playwriting. In each production advanced students are put in full charge, are given a budget, and are allowed to prepare and present a play of their own choice under the same conditions as though they were members of the staff. Sometimes these productions are a partial fulfillment of the requirements of the Master's degree. The plays are open to the general public but are not a part of the subscription series and are offered at a reduced rate.

Three full-length plays were presented in the Studio Theatre by candidates for the Master's degree. Miss Marjorie Walsh was the director, designer and costumer of *THEY KNEW WHAT THEY WANTED* by Sydney Howard; Charles Ingram was the director of *THE ADDING MACHINE* by Elmer Rice; and Harrison McCreath was his designer and costumer. Melvin Ellett was director, designer, and costumer of *A DOLL'S HOUSE* by Henrik Ibsen. All three were creditable productions.

A program of two plays, *JOHN DOE* by Bernard Dryer and *MY HEART'S IN THE HIGHLANDS* by William Saroyan, was presented under the direction of A. Nicholas Vardac as a demonstration of special techniques in staging.

One program of plays written by students of the Speech and Drama course in Playwriting was presented with student directors and designers. It is the hope of the staff that we will be able in the future to present more plays written by our own students.

A special single performance was given of the controversial play *NO EXIT* by Jean Paul Sartre. It was well received by the audience and received considerable critical acclaim. There were many requests that the performance be repeated but this was not possible, due to the crowded production schedule in the Little Theatre. *NO EXIT* was directed by George Nichols III, who is a candidate for the Doctor's degree in Drama and Theatre.

The Studio Theatre also sponsored a series of play-readings which were open to the public for a very modest fee. The program was under the direction of Norman Philbrick and was designed to give more experience to our actors and directors, as well as to provide an opportunity for the students to become familiar with plays which cannot be produced in the regular schedule of plays. There were six playreadings: *THE DUCHESS OF MALFI* by John Webster, *AN IDEAL HUSBAND* by Oscar Wilde, *GAMMER GURTON'S NEEDLE*, *THE NEW YORK IDEA* by Langdon Mitchell, *JOHN GABRIEL BORKMAN* by Henrik Ibsen, and *UNCLE TOM'S CABIN*. The latter was presented in Cubberly Auditorium because of the over-crowded schedule or rehearsals and productions in the Little Theatre.

Another innovation of this year was the appointment of five junior artists-in-residence. The Stanford Players voted \$3000 for this purpose and Stanford University and the National Theatre Conference each appropriated \$2250 to establish five fellowships of \$1500. Two of the fellowships were awarded to technical workers in the theatre and three to young actors.

It was decided to award the five fellowships to young theatre workers who had graduated from a university and who had shown unusual promise in their chosen fields during their undergraduate work. It was also decided to make an exception for the applicants for the technical fellowships and accept applications from those who had not yet received their B. A. degrees. Letters were sent to the heads of drama departments in other universities, to the directors of community theatres, and to professional theatre agents and producers. The response to the plan was immediately enthusiastic and many excellent applications were received. In January the fellowships were awarded to Miss Beatrice Manley, actress, a graduate of New York University; John Walker Vaughan, actor, a graduate of Indiana State College; William Vorenberg, actor, a graduate of the University of New Mexico; Jack Neeson, a graduate of the University of Delaware with an M. A. degree from Western Reserve University; and to Williard Schurz, a graduate of the Pasadena Playhouse. Each of the five recipients had had considerable professional experience.

The objects of the plan were to provide Stanford with a group of talented young people who could help to raise the standards of performances and thus indirectly raise the standards of instruction in the fields of acting and directing; to provide assistants in the department who could give individual instruction to advanced students in acting and design; to provide capable actors who could assist advanced students in directing by providing them with actors who could devote more time to rehearsals than is possible for the average student actor; and to offer the fellowship recipients an opportunity for growth and personal development in their own work.

The plan was an immediate success. The first assignment was a class room performance of *BACK TO METHUSALEM* by George Bernard Shaw under the direction of the students in the class in advanced directing. This experience could not have been offered to our directors if they had been entirely dependent upon the time and talents of volunteer student actors.

In all tryouts for Stanford Players productions, Studio Theatre productions, and playreadings, the acting fellowship holders participated on equal terms with our own student actors. The five junior artists-in-residence also volunteered their services to assist Rams Head in their productions. Williard Schurz and Jack Neeson became instructors and shop assistants in the Benning courses in stagecraft. Mr. Schurz also served as designer for *THE DEVIL'S DISCIPLE* in spring quarter when our staff designer, Wendell Cole, was off duty. The production of Jean Paul Sartre's *NO EXIT* would not have been possible without the services of Miss Manley and would not have been as great a success without her excellent performance.

F. Cowles Strickland was on leave in the spring quarter but volunteered his services to teach Speech and Drama 162, Rehearsal and Performance. With the students of this class and the fellowship

actors he prepared a special program of plays to be presented during the summer quarter. The fellowship actors and regular students were cast in four one-act plays by Anton Chekov, presented to our audiences under the title of SHOOTKI. They were also offered to service organizations of the Bay Area as programs for their meetings. Performances were given for the Stanford Mothers Club, Eastbay Stanford Mothers Club, San Francisco English Speaking Union, San Francisco Kiwanis Club, San Mateo Junior College, Veterans Administration Facility, and to members attending a chemistry convention at Stanford.

In addition to SHOOTKI, the summer season included HIGH TOR by Maxwell Anderson and AS YOU LIKE IT by William Shakespeare. Jack Neeson was the designer of SHOOTKI, Williard Schurz the designer for HIGH TOR, and Wendell Cole the designer for AS YOU LIKE IT. Mr. Strickland directed the three plays. Each employed the services of the fellowship actors. Our own students, in addition to having the experience of working with these actors, had the advantages of playing more parts in more plays and the special experience of preparing three plays at the same time, which were well received by our audiences. AS YOU LIKE IT, which happened to be produced on the tenth anniversary of the opening of Memorial Hall, was especially well received.

The attendance records and box office receipts of the Stanford Players are given below. No exact figures are available but we are certain that not more than 25 per cent of our total attendance are students at the university. This is regrettable since the program is primarily designed for students. The staff believes that the failure of students of the university as a whole to take advantage of the program is due in part to the attitude of the editors of the Stanford Daily. The critics of the Palo Alto Times and the San Francisco Chronicle who have regularly reviewed our plays have been complimentary to all of them and enthusiastic in praise of several of them. In contrast, the student reviewers of the Stanford Daily have been condemnatory of most of them, viciously derogatory of several. The staff has no explanation of the discrepancy in critical judgments. Our audiences this year have been larger than ever before, which would suggest that the majority of theatre-goers are in agreement with the critics of the Times and the Chronicle. The unfortunate result of the student reviews is to discourage student attendance at plays.

<u>Play</u>	<u>Total Attendance</u>	<u>Box Office Receipts</u>		
<u>Subscription Series</u>		<u>Cash</u>	<u>Season</u>	<u>Total</u>
Macbeth	4659	\$1737.05	\$1025.00	\$2762.05
The Royal Family	3066	736.50	1025.00	1761.50
Der Freischutz	4650	1661.40	1025.00	2686.40
The Devil's Disciple	3111	680.90	1025.00	1705.90
	15486			\$8915.85
<u>Summer Series</u>				
Shootki	1009			749.75
High Tor	1324			983.00
As You Like It	1430			1055.25
	3763			\$2788.00
<u>Studio Theatre</u>				
They Knew What They Wanted	676			333.00
John Doe and My Heart's In The Highlands	668			332.40
Original one-act plays	310			155.00
The Adding Machine	605			302.50
No Exit	187			93.50
A Doll's House	704			345.10
	3150			\$1561.50
<u>Playreadings</u>				
The Duchess of Malfi	191			47.75
An Ideal Husband	97			24.25
Gammer Gurton's Needle	123			30.75
The New York Idea	99			24.75
John Gabriel Borkman	144			36.00
Uncle Tom's Cabin	94			23.50
The Knight of the Burning Pestle	40			10.00
	788			\$ 197.00
GRAND TOTAL	23187	GRAND TOTAL	\$13462.35	

In addition to paying the costs of the production of all plays, including the salaries of the two senior artists-in-residence for MACBETH, the Stanford Players have made several major contributions to the upkeep of Memorial Hall and its equipment:

Drama Library	\$250.00
Furniture	278.08
Sewing machine	104.04
Lighting equipment	135.80
Plastering wall of Little Theatre	326.15
Junior artists-in-residence	3000.00
	<u>\$4094.07</u>

The results of this year's operation of the Stanford Players have been so good that the staff has voted to continue the same policies during the next year. The subscription series will again be limited to four productions in Memorial Auditorium. The Studio Theatre will again function in the Little Theatre, devoting its efforts to providing maximum experience for our students. And the staff has expressed itself as being willing to make another contribution to bring several junior artists-in-residence to Stanford

during the winter, spring, and summer quarters.

But of even greater importance than the above contributions to fellowships and the purchase of equipment for an upkeep of Memorial Hall is the provision by the Stanford Players of the complete laboratory set-up for the training of students enrolled in the Department of Speech and Drama. It is as though the Department of Chemistry or of Physics provided entirely without expense to the university the laboratory equipment and the expense for all students enrolled in their courses in chemistry and physics. It should be pointed out in this connection that each staff member engaged in the work of the Stanford Players also carries a full teaching load of classroom work, amounting to an average of twelve units per quarter. Through their productions, the Stanford Players are not only assisting largely in the equipping of Memorial Hall but are saving the university all laboratory expenses in the training of the large number of students enrolled in this program of work.

Radio.—With the addition of Mr. John V. Zuckerman to the faculty of the department, as Director of the Radio Workshop and the Audio-Visual Aids Program, it was possible to expand the radio activities of the department, and of the university, and to begin the re-development of that program interrupted by the war. A minimum basic undergraduate program of instruction in radio courses were planned, and added to the curriculum of the department. These included an introductory course in the history, organization, and management of the industry, and principles of radio station organization; a course in writing for the radio; a course in radio announcing; an advanced course in radio acting and directing. In addition, two technical courses, one for engineers and the other for non-engineering students, and an individual instruction course dealing with projects in broadcasting, were developed and added to the curriculum. Arrangements were completed whereby Mr. Skipwith W. Athey would join the faculty of the Department of Speech and Drama on a half-time basis, and the faculty of the Department of Electrical Engineering on a half-time basis. Mr. Athey will offer the course work in the technical field of Radio; will serve as technical director of Radio for the university, and will serve in supervision of the stage lighting and sound effects courses in the drama curriculum.

Plans were launched for the development of a program in the field of research, and the field of audience behavior. This program, when developed, will be carried on in cooperation with other interested schools, and departments of the university. Discussions are now underway towards the development of this program of research, dealing with the mass media of communication, and their sociological and humanistic aspects.

The Radio Workshop was organized in January as an extra-curricular activity under the direction of Mr. John Zuckerman with an initial membership of 50 students. During the spring quarter, the Radio Workshop presented weekly programs over the newly organized Student Carrier Current Station.

In the autumn quarter, a group of students interested in the establishment of a Carrier-Current Station on the Stanford Campus began discussion toward that end. The President appointed

a student-faculty committee to investigate the possibilities and the feasibility of the establishment of such a station. As a result of a recommendation by this committee, the administration made a grant of \$1500 for the experimental operation of such a station during the winter quarter. Among other students chiefly instrumental for initiating, organizing and developing the station were Robert Heller and William Eilers, the two major leaders. Under their leadership, the station was built at Stanford Village and was operated on a trial basis during the winter quarter. Originally the station linked Lagunita, Encina and the Village by means of miniature radio transmitters leading into the electrical power circuits of those housing units. The temporary operation period during the winter quarter was found insufficient to test the usefulness of KSU, as the student station was named, as a medium of education and information and it was decided to continue the station during the same spring quarter on another temporary test basis. In order to make these tests more complete and more thorough, the station was moved from the Stanford Village, at the beginning of the spring quarter, and housed in the radio studio of the Department of Speech and Drama in Memorial Hall. Offices of the student personnel in charge of the station were established in the basement of Memorial Hall. Students from all schools and departments in the university participated in the station operation. Through the sale of advertising, the station earned a revenue of a thousand dollars during the spring quarter. At the end of the spring quarter, a report of the educational possibilities of the station showed that 81 students had participated in the station actively on an average of 8 hours per week. These students participated in programming, engineering, advertising, and business activities. A number of young people with physical handicaps were given opportunity to perform work which was instrumental, at least in one case, in leading to a professional position in the radio industry. The station offered a variety of programs, including cultural programs, informational programs, broadcasts of International Student Conference Debates, election speeches, drama and music criticisms and broadcasts of the Stanford Symphony and Band Concerts.

The faculty student committee assigned by the administration to evaluate the usefulness of station KSU, recommended that the station be added permanently to the list of the university activities. It will continue to operate as a practical laboratory for the courses offered by the Department of Speech and Drama in the Field of Radio.

During the summer quarter, the station was operated in conjunction with the NBC-Stanford Radio Institute. The faculty of the department believes that the continuance of KSU will give the University another unifying activity which will also be of service in the complex educational program on the campus.

Several programs were prepared and broadcast during the year. Perhaps the most noteworthy of these was the Easter Sunday Service from the Lawrence Frost Memorial Amphitheatre, with the Hoover Tower Carillon Bells, broadcast over the NBC coast-to-coast network. This Easter Service was presented in the early morning, in the Frost Amphitheatre, in order that persons in this vicinity caring to witness the program could

attend. Over five-thousand people took advantage of this opportunity.

During the month of July, a series of four educational broadcasts on vocational guidance and careers was presented over the CBS facilities. A number of prominent faculty members and students participated in this program.

NBC-Stanford Radio Institute.--For the fifth consecutive summer quarter a Radio Institute was offered by the Department in cooperation with the National Broadcasting Company through its Station KPO in San Francisco. The current year's program, extending from June 19 through August 16, 1947, differed slightly from those of previous years with course work planned to serve two main concentrations of interest: men and women concerned with commercial broadcasting and its allied services; those concerned with radio's use in educational institutions, civic and voluntary organizations. A sequence of courses was required for each, and a group of optional courses allowed a considerable range of subject matter and activities for individual choice. A workshop plan was designed for each concentration to provide opportunities to put into immediate practice some of the ideas, suggestions, and training that the students acquired in the eleven courses which made up the over-all study program.

In the total enrollment of 70, there were 44 men, 26 women. Sixty-two were registered for the full program, eight for one or more courses; forty-three were registered for university credit, twenty-seven as special students not for credit. Geographically, California and nineteen additional states, British Columbia, and the Territory of Hawaii were represented, with regional totals showing 40 from California; 12 from the other western states; 8 from the middle west; 8 from the east; one each from Hawaii and B. C.

The faculty included Richard Bertrandias, Harry Bubeck, Alfred W. Crapsey, John W. Elwood, Anthony Freeman, John B. Grover, Don Hall, Herbert Heyde, Dwight Newton, and Hal Wolf from the staff of KPO in San Francisco; from Stanford, Hubert Heffner, Marjorie McGilbreay (visiting lecturer from Mountain View High School), Inez G. Richardson, James J. Walters and John V. Zuckerman. From the vantage point of special experience a number of guest lecturers supplemented the work of the regular faculty: Robert Baxter, Facts Consolidated, Inc., of San Francisco; Harold Bock, Manager, Television Dept., NBC, Los Angeles; Hal Burdick, writer-producer, San Francisco; Mrs. H. J. Cochran, Radio Chairman, A.A.U.W., San Francisco; David Crandall, program director, Los Angeles Times Television Station KTTV, Los Angeles; Keith Collins, General Manager, KMJ, Fresno; Cecile Creed, Stanford School Broadcast, Standard Oil Company of California, San Francisco; James Day, Public Service Dept., KPO; K. L. Dragoo, program director, F. M. Station KALW, San Francisco; Thomas Foster, radio editor, San Francisco Shopping News; Frances Frater, educational director, McClatchy Broadcasting Co., Sacramento; Richard Harper Graham, legal counsellor, Western Division NBC, Los Angeles; George Greaves, assistant general manager, KPO; Walter Guild, Garfield and Guild Advertising Agency, San Francisco; William Hanrehan, San Francisco Employers Council, San Francisco; David Lasley, Promotion Dept., KPO; William Pabst, general manager, KPRC, San

Francisco; Henry Schacht, Agricultural Director, KPO, San Francisco; Glenn Shaw, general manager, KIX, Oakland; George Snell, program director, KEEN, San Jose; Paul Speegle, radio editor, San Francisco Chronicle; Sydney Strotz, vice president NBC, Los Angeles; John Thompson, news and special events department, KPO.

The cooperation of KPO staff members was especially noteworthy. In working with classes and in assisting individual students, people from every department of the organization were helpful. If any were singled out for particular mention it would be the engineers who handled studio assignments where performance classes were held.

Radio writing, elementary production, advanced production-direction, announcing, technical equipment and control room operation, news writing, program sales and advertising, a new course - music in broadcasting, program planning and scheduling, radio for teachers, and the general survey course - Broadcasting in the United States, with the two workshops, made up the program of courses. Class work was divided between the campus and the KPO studios. Monday, Wednesday, and Friday classes were held on campus; Tuesday and Thursday classes at Radio City. Institute members carried the main responsibility for programming and operating the recently established intercampus, carrier-current station, KSU, for its summer quarter schedule of Sunday through Thursday, 7:00 to 11:00 p.m.

Script writing competition has been a feature of each year's writing class. One script is selected for a coast-to-coast broadcast which marks the closing exercises of the eight weeks' work. The 1947 selection was a comedy fantasy entitled "Scotch And So Diverting," written by Martin C. Nalder, of San Francisco. The play was presented on August 16, 1947, 12--12:30 p.m. P.S.T., over the NBC network by an all student cast under the direction of John B. Grover.

Studio A at Radio City, from which the broadcast originated, had to be cleared immediately because of earlier commitments. The closing exercises, therefore, were transferred to George Mardikian's Omar Khayyam restaurant, where a buffet luncheon was served for Institute members and their guests. After luncheon Mr. Heffner spoke briefly, focusing attention upon the great responsibility and, therefore, the great opportunity which the situation in public affairs holds for American broadcasters. He pointed out that Stanford and NBC work together on training programs such as the summer Institute in an endeavor to extend the awareness of radio's place among the three great media of communication, and to prepare young people to handle in a spirit of public service any part of the big job that must be done in radio. To close the session Mr. Elwood presented to each student who merited the award a certificate showing satisfactory completion of course work.

The NBC award of full tuition refund to the student selected for superior work went to Martin C. Nalder. Two students in addition to Mr. Nalder received honorable mention: Miss Jeanette Ringland of Cedar Rapids, Iowa, and Orin Parker, St. Anthony, Idaho, senior from Brigham Young University, Provo, Utah.

In its capacity for accomplishment American broadcasting today holds an awe-inspiring position. We hope that every student who

has participated in the Institute has benefited and is better equipped to make a substantial contribution wherever his work may touch the great field of radio broadcasting.

Stanford Speakers' Service.—The students speakers service was revived after a period of more than two years' dormancy in the fall of 1946. There had been no roster published since 1943-44. Dr. Leland T. Chapin resumed direction of the service upon his return to Stanford in 1945. He supplied student speakers to those organizations that sent in requests during the year. Mr. William Lucas, the present director, took charge of the student speakers service in September 1946. At the close of fall quarter, 1946, a roster was compiled which listed twelve student speakers who presented thirteen different subjects. This roster was sent out to approximately 150 organizations. Throughout the year new students were recruited and several more speeches and subjects were added to the list. Also, other types of entertainment were arranged for from time to time at the request of particular organizations. At the beginning of the season there was a scarcity of student speakers. During the winter and spring quarters students with ability in this form of entertainment were developed in the interpretative reading courses, and these will be available next season.

Throughout autumn, winter, and spring quarters of 1946-47, 48 students have participated. The majority of students were Lower Division and Speech and Drama majors; there were, however, nine other departments represented among those participating. Speeches, readings, symposiums, panel discussions, and other forms of entertainment have been presented in 11 localities to 33 organizations before a total audience of 800 persons. Perhaps one of the most interesting programs arranged, and one which received enthusiastic approval, was a symposium discussion by four men students: Subhas Dhar, an Indian student who is studying in the Food Research Institute; Hafez Farmanfarma, a Lower Division student whose home is in Teheran, Iran; Kay Kitigawa, a Nisei who was an interpreter on the staff of General MacArthur; and Paul Frederick Lawrence, a graduate in the School of Education. This symposium was first arranged at the request of the Woodside P.T.A. to discuss the problem, "Understanding Makes One World--Without Distinction as to Race or Religion." The Woodside program attracted the attention of a group in San Carlos who have recently organized a Community Forum there, and the symposium was engaged to appear before one of their meetings.

The gross income received for student programs amounted to \$79. A complete financial statement of the student speakers service is included elsewhere in this report.

Early in the fall an effort was made to interest the Music Department in the opportunities for public performance offered students by the speakers service. This was not successful. It was said that there were no students prepared for such performance. An attempt will be made again next year to recruit students from this area. Also it was regretted that no dramatic entertainment seemed available this year. It is hoped that next year conditions may be such that simple one-acts, cuttings of plays, etc. may be added to the roster.

With the increase in speakers it is proposed that a more complete and varied roster will be issued in the early fall of

1947. The Speech and Drama Department received a gift through the Stanford Fund drive for allocation to the speakers service. With this money available, together with the funds accumulated during the year, it is hoped that the roster may be printed in an attractive form similar to those of former years. Also it may be possible to secure secretarial assistance in addressing and mailing the rosters, so that a far greater number of organizations may be reached. During the past year no outside assistance has been employed.

From the growing interest on the part of the students, as well as organizations requesting programs, it is perhaps not overly optimistic to predict an even more successful year for the student speakers service in 1947-48.

Faculty Speakers Service.—The activities of the faculty speakers service were curtailed somewhat by the disrupting influences of the war. Prior to December, 1946, the last faculty roster published was that of May, 1944. Upon his return to Stanford Dr. Leland T. Chapin took up the direction of the service and ably supplied the requests that were received for speakers throughout 1945-46.

In October a letter explaining the faculty service and requesting speeches and subjects was sent to all members of the academic council. As the returns from this communication were received, a roster was compiled. Of the 250 faculty members to whom letters were sent, 45 responded. These speakers offered a list of 117 varied topics. In December, 1946, copies of the roster were mimeographed and mailed to approximately 300 organizations in the Peninsula and Bay areas.

During the year requests were received for 16 speakers from 12 organizations. This response was disappointing. It is hoped that next year secretarial assistance may be provided in compiling and mailing the roster so that a greater number may be sent out to a far larger number of organizations. The belief is that if this can be accomplished, there will be many more requests for our faculty speakers. The number of engagements arranged through the speakers service does not, however, represent the total activity of this nature on the part of the faculty. A large number of requests for speeches are addressed directly to the faculty members themselves, and in such cases the arrangements are usually made independently of the speakers service.

The gross income received for faculty speaking engagements during the year was \$470. Of this the service retained \$85.50, a slight fraction above 7 per cent, for its services. For four of the speeches given no remuneration was received. It will be observed on the financial report that the income received by the faculty service failed to cover the expenses of its operation. The deficit was taken care of from the surplus of the student service. The commission charged by the service for arranging faculty speaking engagements the past year was \$2.50 on all fees collected up to and including \$50. On fees in excess of \$50 the charge was 5 per cent. It is anticipated that with the wider coverage of the roster next year, more speakers will be demanded and the gross income will consequently be increased sufficiently to cover the operating expenses. If this does not prove to be the case, it may be advisable to increase the commission charged the faculty speakers to a straight 10 per cent.

Very pleasant relations with the Director of Information and the General Secretary have developed this year. Both of these offices have cooperated generously and enthusiastically with the speakers service. The Office of Information has sent press notices of faculty speakers to the director for his perusal and has supplied biographical and publicity material on faculty speakers from time to time. The General Secretary has referred requests for speakers that have come to him to the service and has assisted in meeting the expenses of at least one speaker when there was no remuneration offered by the organization. It is hoped that in the coming year a substantial increase will be enjoyed in the number of faculty speakers requested and engagements filled.

Debate.—Fifty-seven students participated in one hundred thirty-five practice debates during the year 1946-47. These students were registered in the lower division and the following schools: Humanities; Social Sciences, Biological Sciences, Physical Sciences, and Engineering.

At the invitation of the President of the University of Hawaii, a Stanford debate team consisting of Frank Church and Dow Carpenter participated in the Fortieth Anniversary celebration of the University of Hawaii. Recordings were made of their speeches and were used by the schools on the Island of Maui as speech models. The speeches will be printed in the University Debater's Annual for 1946-47, published by H. W. Wilson Company of New York.

Frank Church, Stanford senior, who graduated with great distinction, won the 53rd Annual Joffre Debate with the University of California.

Ambrose Rosehill won a \$500 prize for first place in the Bay Area oratorical contest on "Patrick Henry".

Stanford participated in the discussions of the Pacific Forensic League and the National Student Assembly of Delta Sigma Rho. Donald Logan, Stanford Junior, was rated second in the Pacific Coast contest, and Robert Bennet, Stanford Sophomore, was minority spokesman at the National Assembly.

It has been the policy of the Stanford Debaters to emphasize scholarship first, and no student has been permitted to participate in a debate off-campus who does not have a scholarship average of B or better. Of the four senior debaters, two were elected to Phi Beta Kappa, and a third debater was graduated with great distinction.

Awards were made as follows: Donald B. Tresidder Perpetual Award, Frank Church; Ronald Key Memorial Award, Robert Vallier; Ray Lyman Wilbur Award, Carol Newton; Mellinkoff Awards, Robert Bennett and Dow Carpenter.

In appreciation of the outstanding record made by the debaters this year, the Associated Students have granted funds for a debate trip to the Eastern Seaboard for the year 1947-48.

Drama Library.—With the exception of a grant of \$250 from the Stanford Players, the Drama Library was entirely without funds during this academic year. Because of this lack of funds it lost valuable opportunities to purchase in the second-hand book market. With the great increase of highly capable graduate students who have received their under graduate and early graduate training in outstanding eastern and middle western institutions, the handicap of the Drama Library is being strongly felt in the Department of Speech and Drama. The major portion of research material in the

field of Speech and Drama is located in eastern repository and eastern and middle-western libraries. Unless Stanford makes a strenuous effort in the next few years to build up essential research materials, we will not be able to maintain our prestige in the graduate field.

Activities of Members of the Faculty.--During the autumn quarter, Professor Heffner delivered a lecture for the San Jose Adult Education Forum on "The Drama's Answer to the Question, 'What Is Man?'" On November 28, he delivered the principal address at the annual meeting of the Western Association of Teachers of Speech, entitled, "Speech and a Liberal Education." During the Christmas holidays, he attended the annual conference of the Speech Association of America, and of the American Educational Theatre Association of America, and of the American Educational Theatre Association, where he read two papers, entitled respectively, "Potentialities for New Research in Theatre and Drama," and "Recent Researches in American Drama." During the year, he participated actively in a series of discussions, undertaken by the School of Humanities dealing with the relationship of Anthropology and the Humanities. And on March 28, 29, and 30, he participated in the conference on this subject held in Santa Barbara. On March 15, he spoke at San Jose State College before a group of Theatre and Drama teachers on "The Ideal High School Production." On June 16, he participated in the inauguration of Robert Edward Burns as President of the College of the Pacific, representing his Alma Mater, the University of North Carolina. On July 1st, he spoke in San Francisco, to the members of the Theatre Library Association, on "Towards an American Theatre." During the year, he agreed to accept the Associate Editorship of the Quarterly Journal of Speech in charge of all publications in that journal in the field of Theatre and Drama. In addition to other articles, he prepared an article on College Dramatics for the Encyclopedia Americana, and published an article in the first number of the Pacific Spectator on "The Decline of the Professional Theatre in America." Throughout the year, he participated actively with the members of the Editorial Board in the development of the Pacific Spectator. Among other committee assignments, he served through the year as chairman of the sub-committee of the Committee on Public Exercises in charge of the Tuesday Evening Series, and chairman of the University Committee on Radio.

Professor Virgil A. Anderson continued during the year as Director of the Speech Clinic, and the Speech Re-education Program in the department; served as chairman of the faculty committee on foreign students; and continued as counselor and critic of the Redwood City Toastmasters' Club. Throughout the year, he served as Associate Editor of Speech Monographs and Associate Editor of the Quarterly Journal of Speech and Book Review Editor of Western Speech. Through the year, he prepared and published a series of book reviews in Western Speech and in the Journal of Speech Disorders. He organized the program, and served as chairman of the section on voice and diction for the annual convention of the Western Association of Teachers of Speech, held in San Francisco during the Thanksgiving holidays. At the meetings of this association, he also spoke on the section program devoted to phonetics. During the Christmas holidays,

he attended the annual convention of the Speech Association of America, held in Chicago, and participated in one of the panel discussions on the program of that association. He was nominated for membership on the Executive Council of the Speech Association of America. During the summer, while he was off duty at Stanford, he taught on the staff of the English Language Institute of the University of California. During the year, upon several occasions, he was invited by the Department of Physical Therapy and the School of Education to lecture before classes and seminars.

Associate Professor Leland T. Chapin, in addition to his regular teaching duties, served as a member of the committee on Contemporary Public Address of the Speech Association of America, President of the Pacific Forensic League, President of the Stanford Chapter of the American Association of University Professors, member of the executive committee of the English Speaking Union in California, chairman of the faculty sub-committee of the Stanford Associates' "Know Your Stanford" committee, member of the lower-division advisors' panel, chairman of the Debate Council. Under a small grant from the Stanford Committee on Supplementary Research Grants, Dr. Chapin has continued his research on the effectiveness of recorded speech as a teaching aid in his course on American Speakers. He has co-operated with the National Committee on Public Address in this project. He was selected as orator for "Old Settlers Day" at 53rd annual celebration at Campbell, California, and participated in a series of lectures before the Adult Education Forum in San Jose. His publication included seven book reviews and a short article in *Western Speech*. Dr. Chapin spent the summer in Scotland, continuing his study of Scottish Rhetoricians of the 18th Century in the National Library of Scotland and the libraries of Edinburgh and St. Andrews Universities.

Associate Professor James Gordon Emerson, in addition to his teaching on a half-time basis, served as chairman of a sub-committee on curriculum study in charge of collecting the materials in the field of rhetoric and public address. He continued in charge of the departmental library volume. He was faculty sponsor of Stanford chapter of Delta Sigma Rho, national honorary debating society, and member of 1947 Board of Judges of the Lions Clubs International scholarship public speaking award for the California-Nevada district. Through the year he pursued his studies in classical and medieval rhetoric and dialectic, and in the field of legal reasoning. He has continued to develop the course in pre-legal argumentation, a field in which Stanford is unique in pre-legal training.

Associate Professor F. Cowles Strickland directed, during the year, six major productions, and three classroom productions in addition to his regular full-time load of teaching. In the spring quarter, with the assistance of the Junior Artists-in-Residence, he prepared a program of Chekov farces which were presented widely to various groups at Stanford and in this vicinity as follows:

- April 15 — Stanford Mothers' Club
- April 24 — English Speaking Union
- April 25 — San Mateo Junior College

- May 23 — Stanford East Bay Mothers' Club
- June 3 — The Kiwanis Club of San Francisco
- June 18 — The Colloidal Chemistry Conference
- June 20 — The American Veterans Association

At each of these presentations Mr. Strickland spoke briefly on the nature of the work in Theatre and Drama at Stanford, and on the Artists-in-Residence project. He continued active supervision of and participation in the activities of the Stanford Players. He served during the year as a member of the Committee on Public Exercises, and again participated in the organization of the Commencement Exercises.

Associate Professor Paul McKelvey continued to serve as co-ordinator of the basic courses, as chairman of the curriculum committee, and as chairman of the oral skills examination committee. During the year he administered a total of 79 oral skills examinations. During the year he also administered the oral examination for prospective teachers taken by students in the School of Education who are seeking credentials. One hundred and thirty-four students took these examinations. After the examinations, he held a conference, or conferences with each of the students. He was the chief speaker at the Installation Banquet of the Mission Toastmasters held at the Alexander Hamilton Hotel in San Francisco in October. In November he served as chairman of the section meeting on Communication Skills at the annual convention of the Western Association of Teachers of Speech. He attended the annual meeting of the Speech Association of America in Chicago in Christmastime, and read a paper at the general session entitled "Communications for the Non-Academic." In February he spoke to the English teachers of the Commerce High School of San Francisco, and in May he spoke to the English and speech teachers at the meeting of the Northern California Junior College Association held at the College of the Pacific. A year ago, at the request of the superintendent, Dr. McKelvey made a minute study of the English and speech curricula of the San Francisco Junior College. During the past year he has supervised the launching of the program in Communication Skills which he recommended. He served as secretary and director of the Civic League of Palo Alto, and is at present a member of the Board of Directors of the Peninsula School. In December, 1946, he published an article in the Quarterly Journal of Speech entitled, "Improving the Fundamental Courses."

Acting Assistant Professor Helene Blattner joined the faculty of the department in the autumn in charge of the courses in the oral interpretation of literature. She participated in the program devoted to interpretation of the Western Association of Teachers of Speech, reading a paper entitled, "The Philosophical Approach to the Study of Literature for Oral Interpretation." In December she presented a program of Christmas poetry for the Stanford Mothers' Club and a similar program for the Stanford Dames. In the winter quarter, she presented a lecture demonstration and criticism for the Toastmistress Club of Palo Alto. During the winter quarter, while Dr. McKelvey was on leave of absence, she served as co-ordinator of the basic courses, and chairman of the oral skills committee. During the summer quarter, she served

as a lower-division advisor for the University.

Instructor Norman Philbrick served on the lower-division advisory committee, the School of Humanities Honors Program Committee, and the Founders' Day Committee. He spoke before the National Thespians' Regional Conference at San Jose State College on "Problems of Casting," and before the Kiwanis Vocational Guidance Conference at the Palo Alto High School on "Theatre and a Vocation." During the year he served as supervising director of the Studio Theatre and was directly in charge of the play-readings. He published several book reviews in Western Speech.

Instructor Wendell Cole, in addition to his regular teaching, designed the settings for four of the major productions of the Stanford Players, and supervised the stage designing of all of the productions.

Technical Director, James McCulloch, was appointed to the faculty of the department at the beginning of the winter quarter, on a part-time basis, in charge of the courses in stage lighting. At the opening of the spring quarter, he was placed on a full-time basis and given the responsibility of Technical Director in the theatre. He has supervised the technical production of all major productions and Studio Theatre productions offered during the winter, spring, and summer quarters. In addition, he has charge of the maintenance of the technical equipment in Memorial Hall.

Instructor Virginia Opsvig, in charge of costuming, has, in addition to her regular program of teaching, designed the costumes for seven major productions of the Stanford Players.

Instructor Helen W. Schrader served as advisor for Speech and Drama majors enrolled in the teacher training program and for graduate students working toward advanced degrees in speech re-education. She served as a member of the credential committee and the committee on teacher training of the School of Education, and of the graduate study committee of the Department of Speech and Drama. She assisted Dr. Chapin with the coaching of the debaters, and with the planning of the debate program.

Instructor Harold Ross, who joined the faculty of the department in September in charge of the courses in stage lighting, resigned his position at the end of the autumn quarter. He was replaced by Technical Director James McCulloch.

HUBERT HEFFNER
Executive Head

SCHOOL OF LAW

STUDENTS

The enrollment was the largest in the history of the School. Four hundred and twenty-five students registered in September, ninety per cent of whom were veterans. The average age of the first-year class, which numbered over two hundred students, was twenty-five years; the average age of the second- and third-year classes was twenty-seven years. One hundred and seventy-five of the men were married and many of them had the additional responsibilities of parents. The age, experience and responsibilities of the student body induced a single-minded application to the job at hand, which helped to ease the very substantial teaching burden of the faculty.

Forty-eight were awarded the LL.B. degree during the year. This was the last of the relatively small wartime classes. It is estimated that over one hundred students who have satisfied the academic requirements for their first six quarters of law study will be graduated during the next academic year.

All of the sixteen graduates who took the bar examination for the first time during the year successfully qualified for admission to practice.

STAFF

The teaching staff included the following permanent members of the faculty: Marion Rice Kirkwood, William Brownlee Owens, George Edward Osborne, Stanley Morrison, Lowell Turrentine, James Emmet Bremner, Harry John Rathbun, John Bingham Hurlbut, and Carl B. Spaeth, professors; and Samuel David Thurman, Jr., associate professor.

The full-time teaching staff was brought to a total of fourteen by four additional appointments: Allan Frederick Smith (LL.M., Michigan, 1941) acting associate professor; and Charles Edward Corker (LL.B., Harvard, 1946), John Richard McDonough (LL.B., Columbia, 1946), and Gordon Kendall Scott (LL.B., Harvard, 1941), acting assistant professors.

Charles Alexander Beardsley of the Oakland Bar, Oscar Kennedy Cushing of the San Francisco Bar, Henry Granville Hill of the San Jose Bar, and Leonard Saxton Lyon of the Los Angeles Bar, continued their very helpful services as non-resident lecturers.

In order to provide a substantial offering of

second- and third-year courses for the 220 students who attended the summer session, five visiting instructors, in addition to Professors Owens, Brenner, Associate Professor Thurman and Assistant Professor Corker were appointed to the summer faculty. The visitors were: Professor Abraham H. Feller, General Counsel to the Secretary General of the United Nations; Clark M. Byse, Associate Professor of Law at the University of Pennsylvania and Willard H. Pedrick, Associate Professor of Law at Northwestern University; Allison Dunham, Assistant Professor of Law, Columbia University, and John O. Honnold, Jr., Assistant Professor of Law at the University of Pennsylvania.

FACULTY ACTIVITIES

Professor Kirkwood has served during the year as Chairman of the Advisory Board and continued service as a member of the University Patent Committee, the Executive Committee of the Academic Council, as a member of the Board of Directors of the San Francisco Legal Aid Society, the Law School Editorial Board of the Foundation Press, Inc., of New York, the Committee on Legal Education and the War of the Association of American Law Schools (until December 31, 1946), under the auspices of which some twenty-two monographs were published on Significant Developments in the Law During the War Years. He attended the meetings of the State Bar of California at San Diego in September, 1946, and met with groups of Stanford Lawyers in San Diego in September, in Los Angeles in November, and in San Francisco in May, 1947. During the year he has completed the manuscript of the California Annotations to the Restatement of Property, Vol. V.

Professor Owens continued to serve as a member of the Faculty Athletic Committee, and as Chairman of the Executive Committee of the Stanford Union. In addition he served throughout the year as a Compliance Commissioner for the Civilian Production Administration, as a member of the California Code Commission, engaged in codifying the statutory law of California, and as a member of a Committee on Educational Films of the Association of American Law Schools. During 1947 the Stanford University Press published the biennial supplement to his book "Forms and Suggestions for California Practice."

Professor Osborne served as a member of the Committee on Aims and Objectives of Legal Education of the Association of American Law Schools. His report on the Committee's symposium was published in the 1946 Handbook of the Association of American Law Schools, pp. 109-112. He also served as a member of the Association's Round Table on Remedies. His study, Problems in Mortgages, appears in Ballantine, Law Problems, 3rd ed., 1947, West Publishing Company.

Professor Morrison prepared a syllabus on "Federal Income Taxation of Trusts and Estates" for the Tax Discussion Series given by the Bar Association of San Francisco. He was associated throughout the year on a part-time basis as counsel with McCutchen, Thomas, Matthew, Griffiths & Greene, San

Francisco.

Professor Lowell Turrentine continued his work on the California Annotations to the Restatement of Property, Vols. 3 and 4, under the auspices of the State Bar of California. He also served on a part-time basis as Compliance Commissioner for the Civilian Production Administration.

Professor Brenner served as Secretary to the National Conference of Bar Examiners and as a member of the American Bar Association Committees on Refresher Courses for Veterans, Continuing Education of the Bar, and Resolutions. He served as a member of the Association's Journal Advisory Board, and The State Bar of California Committee of Cooperation Between the Law Schools and the Committee of Bar Examiners, and as Research Director of the California State Bar Committee of Bar Examiners. Professor Brenner attended the annual meetings of the State Bar of California at Coronado, California, the American Bar Association in Atlantic City, New Jersey, the Association of American Law Schools, Chicago, Illinois, and the American Law Institute, Washington, D. C.; the meeting of the American Bar Association Committees on Refresher Courses for Veterans, at Atlantic City, New Jersey, and Continuing Education of the Bar, at Chicago, Illinois and Washington, D. C. He also met with Stanford Law Alumni groups in several California cities, and in Reno, Salt Lake City, Chicago, Washington, D. C., New York City, St. Paul, Helena, Montana, Spokane, Seattle, and Portland.

Professor Rathbun has served during the year as a member of the Committee on Lower Division Administration and as a member of the panel of lower division advisers. He has continued to teach the courses in Business Law given by the Law School for the benefit of upper division and graduate students throughout the university as well as those given under the auspices of the Graduate School of Business for students of that school.

Professor Thurman continued to serve as a member of the Committee of Lower Division Advisers of the University and as Secretary of the Law School Faculty. He addressed the Commonwealth Club of California on January 24, 1947, on the subject of Today's Supreme Court, spoke at the Stanford Alumni Conference in May on Labor and the United States Supreme Court, and addressed the Wenatchee, Washington, Public Forum on November 26, 1946, on the subject of World Government. During the past year he also spoke before various service clubs and community groups on the work of the United Nations and the United States Supreme Court. In December he attended a meeting of the Association of American Law Schools in Chicago, Illinois, and during the past year became a member of the California Bar Association. He served as Vice-President of the Stanford chapter of Phi Beta Kappa and as Secretary-Treasurer of the Stanford chapter of The Order of the Coif, honorary legal fraternity. He contributed an article to the January-February issue of the Journal of the State Bar of California on "The Coming Test of the Supreme Court", Vol. 22, pp. 21-37. The same article was reprinted in the March-April issue of the Utah Bar Bulletin,

Vol. 17, pp. 41-49.

Dean Spaeth devoted a substantial part of his first year at the Law School to meetings with alumni. These meetings helped to lay the groundwork for continuing collaboration and consultation between alumni and faculty on problems of curriculum and on such activities as the law review and the Moot Court. Another step toward such collaboration was taken in the spring when both the Northern and Southern California Law Societies designated committees to begin consultations with the faculty early in the year 1947-48. In addition to meeting with graduates of the school at a series of luncheons in San Francisco, at a dinner meeting in Los Angeles, and at other informal meetings throughout California, the Dean met with alumni in Boston, New York, Washington and Chicago during a trip to the East in December. On the same trip he visited the Harvard, Yale, Columbia and Northwestern law schools, met with the members of the curriculum committees of those schools, and then attended the annual meeting of the Association of American Law Schools at Chicago in December. The Dean was appointed a member of the Editorial Board of the legal casebook series of the Michie Publishing Company and was elected Vice President and trustee of the newly formed World Affairs Council of Northern California. In the field of international affairs his speaking engagements included an address to the San Francisco Bar Association on "Lawyers and International Understanding" and to the Stanford Alumni Conference on "Latin America".

CURRICULUM

During the winter and spring quarters the faculty made a detailed study of the entire curriculum. The content of each course and the time allocated to it were carefully considered in light of the demands upon our graduates as lawyers and citizens in the post-war world. The study induced only minor changes in courses for the academic year 1947-48 but groundwork was laid for further detailed analysis of such fundamental questions as those presented by the growing demand for correlated instruction in law and in economics. In response to the need for a first-year course that may aid students in the transition to a new discipline, it was decided to offer a four-unit course on legal method during the first quarter of law study. New course offerings in International Law and Organization and in Comparative Law will afford the student opportunities for investigation of international questions which will be of increasing importance to him as a citizen even though he does not enter international public service or the practice of international law. Professor Charles Fairman (S.J.D., Harvard, 1938, Ph.D., Harvard, 1926), who has been a member of the Department of Political Science since 1938 and its Chairman from 1944-46, was appointed Professor of Law to teach the course in International Law and Organization. Acting Assistant Professor Berman, a recent graduate

of the Yale Law School, is to teach the course in Comparative Law which will place major emphasis upon Soviet Law and Institutions.

LAW REVIEW

Among the most important developments of the year was the faculty decision to begin the training of students for the publication of a law review. This action was prompted by the conclusion that the experience of law schools over the country has demonstrated the effectiveness of a student-published review as a vehicle for developing research techniques and the all-important writing skill. During the next academic year the top-ranking students who will be entering their second year will be trained for editorial responsibilities through the publication of an intramural review, made up entirely of student contributions, and distributed only to alumni and students of the School. If this year of training, which began during the summer of 1947, develops and demonstrates the necessary student capacity, it is proposed to publish the first issue of a Stanford law quarterly review in October of 1948.

MOOT COURT

The Moot Court program was revived on a pre-war basis. The interest among the large first-year class in the preliminary trials, and particularly in the semi-final and final hearings, induced the faculty to make special arrangements for planning, conducting, and supervising the Moot Court program in the year 1947-48. Two members of the faculty, Acting Assistant Professors Scott and Young, will devote one-half of their teaching time to the Moot Court program. It is hoped that through faculty guidance and counselling, the students will be enabled to derive greater benefit both from the experience in oral argument and from brief writing.

BUILDING FACILITIES

In order to provide adequate library reading space for the large student body, conference rooms for moot court and law review work, and offices for the new members of the faculty, the Administration of the University has made available almost all of the building which formerly housed the German Department. A working library for first-year law students has been set up in the new space which will provide reading rooms for about one hundred and forty men. In addition, five offices are provided for faculty and administrative assistants. In this manner it is believed that our space needs will be adequately taken care of, pending the completion of the new Law School Building.

The detailed architect's and engineering drawings

were completed in the spring for the new Law School Building. The necessary funds for construction are available and work will begin as soon as a firm bid can be obtained from a well established contracting firm.

Construction of the Crothers Law Dormitory is under way and we are informed that it should be ready for occupancy in the summer of 1948. We are encouraged to believe that the satisfactory negotiation of a contract for the dormitory may indicate an easing of conditions in the building industry which will permit an early conclusion of a contract for the main building.

We were delighted to receive a gift of sixty-two of the Vanity Fair prints of English judges by Quiz and Spy from Judge M. C. Sloss of San Francisco. The prints, which Judge Sloss presented for the new Law School building, now hang in the faculty offices at the School. Included among the individual donors of books for the Library were Paul E. Basye, D. Stott Bushnell, Alvin C. Carr, Hiram E. Casey, Homer D. Crotty, Mr. and Mrs. George E. Culver (in memory of Roy Valentine Reppy), John M. Daniel, Hensley S. and Gregory H. Davis, James Lawrence Fly, Dan S. Hammack, Jr., John B. Hurlbut, William B. Johnston, Marion Rice Kirkwood, W. C. Montgomery, Mrs. James J. Nealon, George E. Osborne, James A. Pardee, Louis Penfield, Halsey L. Rixford, Walter Robb, C. J. Rogers, Lamar Tooze, and Lowell Turrentine. Mrs. W. Kent Stone of Burlingame presented the School with a bust of Chancellor Kent for the new Law School Library.

During the year Charles A. Beardsley, Walter Bruns, Robert Littler, Everett Layman, Herbert Hahn, Henry Hill, Francis Price, Marian Jones, T. C. Rice, Charles de Young Elkus, Jr., John Jennings, Joseph Sullivan and Roland C. Davis lectured to the class in Office Practice. Arthur B. Dunne of San Francisco and F. E. Hoffman of San Mateo presented lectures in the course on The Legal Profession.

CARL B. SPAETH,
Professor of Law and Dean of
the School of Law.

SCHOOL OF MEDICINE

In completing the academic year 1946-47, the School of Medicine had its first experience without the wartime accelerated schedule. Instruction was given in the undergraduate divisions throughout the usual nine months of the year with no required courses scheduled for undergraduates during the summer quarter. Several of our students remained with us in the clinics, laboratories and wards during the summer of 1947, taking elective work. It was satisfying to everyone to have a little period of freedom from teaching with some time to devote to scientific matters of one's own interest.

A series of postgraduate review courses for practicing physicians was given September 2nd to September 7, 1946. During the week 200 physicians attended these courses, devoting their time each morning and each afternoon to a single subject. The postgraduate course was very well received and the attendance was the highest in our experience:

One of our most satisfying activities during the year was the provision of nineteen graduate fellowships in different departments in the Medical School. These fellowships were made possible by contributions sponsored by the Medical Alumni Association and by funds made available to us for this purpose by the Rockefeller Foundation. Each appointment was for one year, and the recipients of such appointments were all veterans recently returned from active duty with the Armed Forces. Each one of the graduate fellows devoted the year to laboratory work, fundamental science and research in a specific field. The many gifts received and accumulated during the war for this specific purpose are deeply appreciated, both by the Medical School and the physicians receiving fellowship appointments. Each department having a graduate fellow is enthusiastic over the results, and it is deeply hoped that such a fellowship program can be continued.

I deeply regret to report the death of Dr. Frank Ellsworth Blaisdell, Sr., Emeritus Professor of Surgery, on July 6, 1946; Dr. Walter Schilling, Assistant Clinical Professor of Medicine, on December 16, 1946; Dr. Harold P. Hill, Clinical Professor of Medicine, Emeritus, on December 31, 1946; Dr. Harvard Y. McNaught, Associate Clinical Professor of Surgery (Otorhinolaryngology), Emeritus, on April 26, 1947; Dr. Thomas Henshaw Kelly, Associate Clinical Professor of Obstetrics and Gynecology, on May 10, 1947. Dr. Robert R. Newell has been granted a sabbatical leave of absence for one year beginning June 1, 1947.

I am sorry to report the following resignations

from the faculty: Dr. Edward Leef, Associate Professor of Medicine (Radiology), effective January 1, 1947, in order to enter private practice in Fresno, California; Dr. Froilan Ludena, Research Associate in Pharmacology and Therapeutics, effective October 31, 1946, to join the research staff of the Winthrop Chemical Company; Dr. John A. Stiles, Associate Clinical Professor of Surgery (Anesthesiology), effective January 1, 1947, in order to enter private practice in Palo Alto.

The following new appointments were made to the faculty during the year: Josephine Hilgard, Associate Clinical Professor of Medicine, assigned to Neuropsychiatry; George T. Leclercq, Assistant Clinical Professor of Medicine, assigned to Radiology; Leon Whitsett, Assistant Clinical Professor of Medicine, assigned to Neuropsychiatry; Knox Finley, Clinical Instructor in Medicine, assigned to Neuropsychiatry; Marcus Krupp, Clinical Instructor in Medicine; William Kuzell, Clinical Instructor in Medicine and Research Associate in Therapeutics; Robert Lofgren, Clinical Instructor in Medicine, assigned to Dermatology; Edward D. McLin, Clinical Instructor in Medicine; Lelland Rather, Instructor in Pathology; Albert C. Daniels, Clinical Instructor in Surgery; John J. Niebauer, Clinical Instructor in Surgery, assigned to Bone and Joint Surgery; Gerald B. O'Connor, Clinical Instructor in Surgery; Marshall L. Skaggs, Clinical Instructor in Surgery, assigned to Anesthesiology; Calvin K. Terwilliger, Clinical Instructor in Surgery; Marvella Vanney, Clinical Instructor in Surgery, assigned to Anesthesiology.

In addition to our rather heavy teaching load there has been a marked increase in the amount of research in all departments, so that research activities this year are much greater than they were before the war. A considerable portion of this research has been financed by grants in aid and gifts from various governmental agencies, foundations and friends of the Medical School.

Registration in the School of Medicine for the year 1946-47 was as follows:

	First Year	Second Year	Third Year	Fourth Year	Total
Autumn Quarter	61	61	60	57	239
Veterans	44	34	37	39	154
Other Men	13	14	17	13	
Women	4	13	6	5	
Winter Quarter	61	62	60	57	240
Veterans	44	35	37	39	155
Other Men	13	14	17	13	
Women	4	13	6	5	

	<u>First Year</u>	<u>Second Year</u>	<u>Third Year</u>	<u>Fourth Year</u>	<u>Total</u>
Spring Quarter	61	62	60	57	240
Veterans	44	35	37	39	155
Other Men	13	14	17	13	
Women	4	13	6	5	

On June 15th the degree of Doctor of Medicine was awarded to sixty-one students who had successfully completed the required four years of work in the Medical School and an internship of one year. I am glad to report that Philip Reginald Aldridge May, who came to us as an exchange student from Oxford, on a Rockefeller Fellowship during the war, was awarded the degree of Doctor of Medicine from Stanford University on June 15, 1947.

The degree of Bachelor of Arts in Nursing was awarded to thirty-five graduate nurses at the commencement on June 15, 1947.

The following loans and scholarship awards were made to medical students during the year: Agnes Walker Scholarship to Vivian Fleming; the Newell Scholarship to Edward A. Free; the Martin Scholarship to Donald G. Landale; the Carson Scholarship to Elizabeth Osterman; the Switzer Scholarships to Helen M. Kipple, Jean Romer and Elizabeth Tarr; the Carrie Hassler Scholarship to Isolde Loewinger; the National Foundation for Infantile Paralysis Scholarship to E. Muriel Bennett; the Dean's Loan Fund to James Burnell, John Christensen, Thomas D. Griffith and Herbert Rubin; the Patek Loan Fund to Benton L. Corley, John C. Green and David Rubsamen; the Kellogg Loan Fund to Frank Wheeler; the Weber Loan Fund to Toby Freedman; the San Francisco County Woman's Auxiliary to David E. Brown; the Julian Wolfsohn Award to Thomas B. Hauschild.

During the past three quarters of this school year the student body again has enjoyed good health with a very low incidence of illness and a splendid health record. There were 320 visits to the Medical Adviser in San Francisco and only eleven students were admitted to the hospital for a total of 45 days' hospitalization.

Dr. Wilder Penfield, Professor of Neurology, McGill University, Montreal, and Director of the Montreal Neurological Institute, has been selected as the Lane Lecturer for 1947. Dr. Penfield will give a series of five lectures on the general topic of the anatomy and physiology of the human cerebral cortex on November 13th, 14th, 17th, 18th and 19, 1947.

The 1946 series of Herzstein Lectures were given by Dr. Homer William Smith, Professor of Physiology, New York University, on December 2nd, 4th and 6, 1946.

The title of Dr. Smith's lectures was "Renal and Circulatory Physiology." These lectures were outstanding and Dr. Smith made a splendid impression during his stay with us.

During the year the first of an annual series of the Jacob Gimbel Lectures on Sex Psychology were given in Lane Hall, November 4th, 6th and 8, 1946, by Dr. Margaret Mead, Associate Curator of Ethnology, American Museum of Natural History. This lectureship was established by a bequest of the late Jacob Gimbel and is administered jointly by the University of California and Stanford University Schools of Medicine. Dr. Mead was a fascinating lecturer, had a splendid audience and was received with enthusiasm.

The sixty-fifth series of Popular Medical Lectures was as follows: March 7th, Dr. Max Fine on "New Eyes for Old: Corneal Transplants;" March 21st, Drs. David Wood, L. H. Garland, Leonard Dobson on "The War on Cancer;" April 11th, Dr. Hale Shirley on "Delinquency and Mental Health in a Changing World;" April 25th, Dr. Rodney Beard on "Contagion from Foreign Lands."

During the year the faculty and members of the student body were addressed by the following guest speakers: Dr. Leonell C. Strong, Research Associate in Anatomy at Yale University School of Medicine, on "Experimental Cancer;" Julius Engelbreth-Holm, Professor of Pathology, University of Copenhagen, on "Acceleration and Inhibition of Tumor Growth;" Homer William Smith, Professor of Physiology, New York University College of Medicine, on "Kidney Function;" Dr. William Dameshek, Clinical Professor of Medicine, Tufts College Medical School, on "Certain Topics on Hematology;" Dr. Ross Golden, Professor of Radiology, Columbia University College of Physicians and Surgeons, on "X-ray Changes in the Small Intestine;" Dr. W. E. Chamberlain, Professor of Radiology, Temple University School of Medicine, on "Some Harmful Effects of Irradiation;" Dr. Leo Rigler, Professor of Radiology, University of Minnesota Medical School, on "Roentgen Observation in Bronchial Obstruction;" and Dr. Sterling Bunnell on "Surgery of the Hand."

It is with great pleasure that I report the receipt of gifts totaling \$227,227.26 during the past year. These gifts were distributed as follows: Research, \$115,517.88; Free Bed Funds, \$7,275.60; Loan Funds, Scholarships and Fellowships, \$43,821.16; General Purpose Fund, \$5,700; Miscellaneous, \$24,687.48; Lane Library, \$2,515.25; Nursing School, \$79; Dean's Special Fund, \$9,000; Medical School Building Fund, \$2,432; Schilling Memorial Fund, \$9,115.46; Rockefeller Foundation, \$6,000; Edith C. Maurice Fund, \$25,583.43; James Foundation, \$10,000; Eleanor Boyd Memorial Fund, \$2,500; E. P. Wilbur Children's Free Care Endowment Fund, \$3,000; Nursery Building Fund, \$10,000. I wish

to express the deep gratitude of the faculty of the School of Medicine to our many friends and donors for their generous support during the past year.

The Stanford Eye Bank was established at Stanford University School of Medicine on March 6, 1947. The Eye Bank is a community service laboratory for collecting and distributing corneas for corneal transplantation not only to members of the Stanford faculty but to qualified ophthalmologists throughout the state. To date its efforts have been highly successful and there are registered more than 500 donors of corneas. More than fifteen corneas have been delivered and transplantation operations performed. The Bank is administered by the Physician Superintendent of the Hospital with an advisory committee consisting of Dr. Max Fine, chairman, Drs. W. E. Borley, Warren D. Horner, Dohrmann K. Pischel and Charles H. DeVaul. So far the Bank has been financed from gift funds made available for that purpose. It is hoped that a small service charge and further donations from recipients of corneas will be sufficient to cover the relatively small expense of operating the Eye Bank.

In our recent intensive study and survey made of our University Libraries, in which Lane Medical Library was included, the Library Committee of the Medical School made certain recommendations concerning the staffing and conduct of Lane Medical Library. These recommendations have been approved by the Director of University Libraries but will not be put into effect until the University initiates certain changes in all its libraries. It is expected, however, that improvements and additions will be made to the Lane Medical Library during the coming year.

I am glad to report the appointment of Jean Thompson as Medical Illustrator at the Medical School in San Francisco. The Medical Illustrator is available to all the departments. Adequate quarters have been provided for her in the experimental laboratories of the Department of Surgery on the fifth floor of the Medical School Building.

The Medical Alumni Association has continued its interest in the Stanford Medical Bulletin, the revolving loan fund for medical students, and the Alumni Jordan Loan Fund. Recently the officers and executive committee of the Medical Alumni Association met with Mr. Tom Carpenter, General Secretary of the University, and discussed methods wherein the Alumni Association will participate in the general program of fund raising now in operation. Regional committees are planned and there is every evidence that the Medical Alumni will take an active part with the General Secretary and the University Administration in securing additional gifts and endowments.

Hospital occupancy during the past year has

remained high but the demand for hospitalization is a little less acute than it was a year ago. This is true both in the teaching wards and in the private hospital facilities. Attendance at the Outpatient Department is increasing and there are several indications that this increase in patients will continue. Operating costs are extremely high. During the past year salaries for hospital employees were increased in October and working hours shortened to forty hours per week on January 1, 1947. The Outpatient Department has been closed on Saturdays and this has required a slight revision in our teaching schedule for the required courses in the senior year. The closing of the Outpatient Department on Saturdays seemed advisable because of the forty-hour week for our employees. There is a shortage of nursing and institutional personnel and at the same time our costs of hospitalization are still increasing. A full staff of assistant residents and residents, however, has been maintained through the year and the quality of service rendered has been exceptionally high. Hospital administration has been difficult during the year and the Physician Superintendent is confronted with many perplexing problems, not the least of which is hospital finances.

In closing this report, I express my sincere gratitude to each member of the Medical School, the School of Nursing and the Hospital Staff for their splendid accomplishment and their devotion to Stanford. We have been short of personnel at times, our building facilities are crowded, and we are badly in need of additional room in order to do a better job of our present activities as well as to engage in new enterprises. Nevertheless, we have a record of unusual accomplishments and all of us have confidence that our additional needs will be satisfied in the near future.

LOREN ROSCOE CHANDLER
Dean

STANFORD UNIVERSITY HOSPITALS

Stanford University Hospitals has just finished a year in which it has given service to more patients than in any year in its history. The patient days for Lane and Stanford showed an increase of three thousand two hundred thirty seven, or, two point six per cent over our previous highest year of 1944-45 and an increase of twenty-five per cent over our last pre-war year. The Operating Room reached an all time record of six thousand five hundred twenty-one operations performed, an increase of fourteen per cent over last year and twenty-four per cent over the last pre-war year. Deliveries have increased two hundred thirty-five per cent over our last pre-war year and twenty-three per cent over last year. The Out Patient Department shows an increase of four thousand nine hundred seventy visits or five per cent above last year and it is expected that further increases in the Clinic visits will continue with the increase in unemployment that is already apparent.

We have been fortunate during the past year in having a full quota of House Staff. We now have sixty-seven members in contrast to our wartime quota of forty-one. The majority of our present House Staff, exclusive of internes, are veterans. With this increased number of House Staff we are able to give better care to our patients, and patients' records have improved. This improvement has been the greatest in Stanford Hospital, where, for the first time, we have had an optimum number of residents.

The Clinical Laboratories have been reorganized under more centralized control. Although the physical plant does not allow for a central location, the laboratory space is divided as to function rather than Clinic and Private service as in the past. It is expected that this will result in better laboratory work, prompter service and happier personnel.

Personnel presents a changing picture this year. Although technical and professional personnel are still scarce, there is an increasing number of unskilled applicants and an increasing need for employment among this group. There has been a decided decrease in turnover in several departments with some upgrading.

For a short time during the winter we had sufficient graduate nurses on the staff, but during the spring and summer, resignations have caused a serious shortage again, and with the expiration on December 31, 1947 of legislation exempting the need for registration in California, it is expected that the situation will become more acute. Student recruitment was decreased this year, and because of insufficient applicants, we did not admit a February Class this year. This shortage of nurses is nation-wide, and the increases in salary plus decreases in hours have made the problem more acute. Present trends indicate the need for another group of personnel to assist the nurses in giving adequate patient care. With this in mind, a group of Nursing Aides were employed, and were given intensive training in non-technical care of the patient. This program has been heartily accepted by the patients, nurses

and doctors, and to the administration it offers one hope of improvement in a trying situation.

On January 1, 1947 a forty hour work week was established for all paid employees in the hospital. This was welcomed by the employees but has resulted in an increase in hospitalization costs. Salaries of hospital employees have increased considerably during the past five years and now hospitals are better able to compete with industrial enterprises in the labor market. These changes have been inevitable.

In addition to the increased cost of personnel, there has been a sharp increase in the cost of foods and most of the other supplies and services during the year. The budgeted expenses for the coming year were estimated at an increase of one hundred nine per cent over the budgeted expenses of 1941-42.

The increase in the cost of hospital care has been nation-wide and is partially responsible for the increased purchase of hospital insurance. At the present time there are twenty-eight million three hundred thousand people enrolled in Blue Cross Hospital Service Plans which represents twenty per cent of the population in the United States and sixteen per cent in Canada. As an example of what this may eventually mean to hospitals, six out of every ten patients admitted to the Rochester General Hospital, Rochester, New York in the past year, were covered by Blue Cross insurance.

A Cancer Detection Clinic was approved at the request of the Cancer Commission of the California Medical Association and the California Division of the American Cancer Society, to be financed by the Society, and will start to function this year.

In October, 1946, the Medical School and Hospital joined in honoring twenty-two of our employees who had given twenty-five years or more of service to the institution. A dinner was held at which one hundred fifty employees, doctors and their wives attended, to pay tribute. The senior employee in the group was Miss Catherine Foran, Chief Switchboard Operator, who had given thirty-nine years of service.

The year has been spent in attempting to stabilize personnel, replenish depleted supplies and equipment, and return to our pre-war high grade service to patients. Some progress has been made and there is reason for encouragement.

The cooperation of personnel, Department Heads, the Clinical Committee, the Dean, the Business Manager and Purchasing Agent, has been greatly appreciated and has made it possible to report a year of accomplishment.

Anthony J. J. Rourke, M.D.
Physician Superintendent

STANFORD UNIVERSITY HOSPITALS

The following tables show the patients admitted, the patient days and the Out-Patient visits:

LANE PATIENTS ADMITTED

	<u>1943-44</u>	<u>1944-45</u>	<u>1945-46</u>	<u>1946-47</u>
Dermatology.....	7	4	4	0
Gynecology.....	46	26	22	11
Medicine.....	812	873	768	739
Neuropsychiatry.....	240	290	292	305
Obstetrics.....	900	1,028	946	1,171
Obstetrics-Infants.....	790	919	863	1,048
Ophthalmology.....	282	306	256	291
Orthopedics.....	300	350	303	320
Otolaryngology.....	477	608	567	546
Pediatrics.....	436	471	521	490
Surgery.....	537	488	552	630
Urology.....	<u>204</u>	<u>187</u>	<u>165</u>	<u>197</u>
Total Patients admitted..	5,031	5,550	5,259	5,747

STANFORD PATIENTS ADMITTED

	<u>1943-44</u>	<u>1944-45</u>	<u>1945-46</u>	<u>1946-47</u>
Dermatology.....	27	24	27	20
Gynecology.....	819	890	869	962
Medicine.....	1,056	1,138	1,103	1,206
Neuropsychiatry.....	204	161	222	131
Obstetrics.....	957	1,209	1,335	1,648
Obstetrics-Infants.....	913	1,079	1,190	1,489
Ophthalmology.....	399	435	438	430
Orthopedics.....	261	253	242	367
Otolaryngology.....	414	269	241	251
Pediatrics.....	15	21	9	11
Surgery.....	948	832	1,009	1,410
Urology.....	<u>369</u>	<u>296</u>	<u>236</u>	<u>213</u>
Total patients admitted..	6,382	6,607	6,921	8,138

LANE PATIENT DAYS

	<u>1943-44</u>	<u>1944-45</u>	<u>1945-46</u>	<u>1946-47</u>
Dermatology.....	43	79	30	6
Gynecology.....	137	220	76	88
Medicine.....	11,332	10,707	9,825	9,662
Neuropsychiatry.....	6,383	5,768	5,935	6,106
Obstetrics.....	7,312	8,234	8,176	6,698
Obstetrics-Infants.....	5,100	5,766	5,821	5,787
Ophthalmology.....	2,283	2,218	2,015	2,063
Orthopedics.....	4,026	3,599	3,916	3,937
Otolaryngology.....	1,513	2,133	1,745	1,599
Pediatrics.....	5,254	6,581	6,012	5,505
Surgery.....	7,111	7,516	9,071	9,912
Urology.....	<u>2,364</u>	<u>2,100</u>	<u>2,229</u>	<u>2,287</u>
Total patient days.....	52,858	54,921	54,851	53,650

Stanford University Hospitals

STANFORD PATIENT DAYS

	<u>1943-44</u>	<u>1944-45</u>	<u>1945-46</u>	<u>1946-47</u>
Dermatology.....	195	429	466	376
Gynecology.....	7,851	7,993	7,303	6,436
Medicine.....	10,406	12,545	11,636	12,982
Neuropsychiatry.....	2,967	2,206	2,661	2,097
Obstetrics.....	7,173	7,901	8,322	8,301
Obstetrics-Infants.....	7,655	8,406	8,558	7,446
Ophthalmology.....	4,549	5,232	5,243	5,042
Orthopedics.....	3,984	5,199	4,422	5,741
Otolaryngology.....	1,497	1,211	1,009	987
Pediatrics.....	452	339	383	980
Surgery.....	12,723	11,096	11,542	17,530
Urology.....	<u>4,621</u>	<u>3,408</u>	<u>2,940</u>	<u>2,531</u>
Total Patient days.....	64,073	65,965	64,485	70,449

LANE HOSPITAL

	<u>1943-44</u>	<u>1944-45</u>	<u>1945-46</u>	<u>1946-47</u>
Average patients per day.....	144.4	150.5	150.3	146.6
Average days stay.....	10.5	9.9	10.4	9.2
Patients died.....	131	142	100	70
Autopsies.....	61	52	52	47
Percentage of Autopsies.....	56*	55*	52*	67.1'
X-ray case visits.....	8,156	7,912	7,744	7,567
X-ray therapy visits.....	3,420	3,352	3,530	3,622
Basal metabolism examinations.....	586	680	649	745
Electrocardiograph examinations....	1,247	1,342	1,190	1,407
Operations.....	2,201	2,340	1,858	1,988
Clinical laboratory examinations...	8,484	11,995	18,865	21,558
Bacteriological reports submitted..	9,112	8,200	8,400	9,069
Physical Therapy visits.....	2,154	1,816	2,007	2,116

STANFORD HOSPITAL

	<u>1943-44</u>	<u>1944-45</u>	<u>1945-46</u>	<u>1946-47</u>
Average patients per day.....	175	180.7	176.7	192.3
Average days stay.....	10.0	9.9	9.3	8.7
Patients died.....	155	174	178	166
Autopsies.....	25	48	58	76
Percentage of Autopsies.....	19*	29*	32*	45.8'
X-ray case visits.....	7,477	7,833	8,025	8,603
X-ray therapy visits.....	3,292	4,182	5,004	4,791
Physical therapy visits.....	4,188	4,995	4,402	4,445
Basal Metabolism examinations.....	634	618	608	533
Electrocardiograph examinations....	904	1,115	1,007	977
Operations.....	3,166	2,963	3,827	4,531
Clinical laboratory examinations...	32,233	34,860	36,119	39,079

*Coroner's cases and stillbirths excluded in compiling percentage.

OUT PATIENT SERVICE

	<u>1943-44</u>	<u>1944-45</u>	<u>1945-46</u>	<u>1946-47</u>
Total number of visits.....	107,405	104,897	105,297	110,267
Average new visits per day...	39.4	27.2	33.0	27.6
Average total visits per day.	349.5	287.3	344.0	405.4

488 more patients were admitted to Lane Hospital than during the previous year and 1131 more patients were admitted to Stanford. There were 1201 less patient days in Lane Hospital and 5915 more patient days in Stanford Hospital than during the previous year.

STANFORD UNIVERSITY HOSPITALS AND OUT PATIENT DEPARTMENT

	<u>1943-44</u>	<u>1944-45</u>	<u>1945-46</u>	<u>1946-47</u>
	<u>before</u>	<u>before</u>	<u>before</u>	<u>before</u>
	<u>Reserves</u>	<u>Reserves</u>	<u>Reserves</u>	<u>Reserves</u>
Deficit, Lane.....	\$ 107,279.06	\$ 67,787.70	\$ 112,200.48	\$ 133,251.25
Profits, Stanford.....	<u>102,673.85</u>	<u>124,429.43</u>	<u>123,253.96</u>	<u>142,792.42</u>
Net deficit, both				
Hospitals.....	\$ 4,605.21	\$	\$	\$
Net profit, both				
Hospitals.....	\$	\$ 56,641.73	\$ 11,053.48	\$ 9,541.17
Deficit, Out-patient				
Department.....	<u>24,515.64</u>	<u>23,468.72</u>	<u>31,364.65</u>	<u>41,289.07</u>
Total deficit, Hos-				
pitals and Clinic....	\$ 29,120.85	\$	\$ 20,311.17	\$ 31,747.90
Total profit, Hospi-				
tals and Clinic.....	\$	\$ 33,173.01	\$	\$

DEPARTMENT OF MEDICINE

A number of important changes have been made in the past year. The House Staff service on the private ward has been entirely reorganized with an increased number of Assistant Residents. This has resulted in much better service to the visiting men, and also has furnished more training for the House Staff. The Out-patient Department has also been reorganized under Dr. C. W. Barnett with an additional full-time Assistant Resident, new appointment system and laboratory routine. The laboratories of Clinical Pathology have also been entirely rebuilt and reorganized.

In spite of these improvements, we still are seriously in need of better physical plant. A ward for contagious cases and a metabolism ward are especially important.

Teaching has been carried on as usual and numerous papers have been published by various members of the Staff.

Arthur L. Bloomfield, M.D.
Professor of Medicine

DEPARTMENT OF SURGERY

The work on the general surgical wards has been supervised during the year by Drs. Chandler, Holman, Reichert, Nagel, Nelson, Howard, Scarborough, Gerbode and Richards. The work in the general surgical out-patient clinic has been under the supervision of Drs. Chandler, Holman, Reichert, Nagel, Nelson, Howard, Scarborough, Dobson, Gerbode, Richards, A. D. Davis, Fender, Klein, Kenney, L. D. Howard, Don Pratt, Cooper, B. L. Davis, Jr. and Westdahl. The general surgical resident staff consisted of Dr. Jack P. Covert, resident; Drs. John R. Abendroth, Luis Arismendi, Robert E. Berner, William R. Eastman, Jr., Alex S. MacKenzie, James W. Martin, and Arnold A. Nutting, assistant residents; Drs. James G. Holmes, George W. Magladry, Jr., Wayne G. Price, Robert F. Schell, Charles M. Secor, and Donald C. Van Dyke, internes.

The following represent summaries of the general surgical service and the services of the five divisions in the Department of Surgery:

GENERAL SURGICAL SERVICEOUT-PATIENT SUMMARY

Number of visits by new patients in Out-patient Clinic.....	901
Number of visits by old patients in Out-patient Clinic.....	9,003
Total number of visits.....	9,904
Minor operations performed in Out-patient Clinic.....	392

IN-PATIENT SUMMARY

Male patients treated surgically in Lane Hospital.....	214
Female patients treated surgically in Lane Hospital.....	231
Children treated surgically in Lane Hospital.....	124
Total.....	569
Operations performed in Lane Hospital.....	560
Total number of patients treated surgically in Lane Hospital.	569
Deaths.....	25
General mortality.....	4.38%
Operations recorded.....	560
Post-operative deaths.....	24
Operative mortality.....	4.28%
Autopsies performed.....	13
Percent autopsies.....	52%

GENITO-URINARY SERVICE

Number of visits by new patients in Out-patient Clinic.....	288
Number of visits by old patients in Out-patient Clinic.....	3,398
Total number of visits.....	3,686
Minor operations performed in Out-patient Clinic.....	10
Cystoscopic examinations in Out-patient Clinic.....	140
Patients admitted to Lane Hospital.....	170
Operations performed in Lane Hospital.....	175
Cystopyelograms performed in Lane Hospital.....	22
Deaths.....	2
Autopsies performed.....	2
Percent autopsies.....	100%

OPHTHALMOLOGICAL SERVICE

Number of visits by new patients in Out-patient Clinic.....	515
Number of visits by old patients in Out-patient Clinic.....	7,450
Total number of visits.....	7,965
Minor operations performed in Out-patient Clinic.....	96
Refractions performed in Out-patient Clinic.....	1,254
Patients admitted to Lane Hospital.....	179
Operations performed in Lane Hospital.....	173
Deaths.....	0

BONE AND JOINT SERVICE

Number of visits by new patients in Out-patient Clinic.....	365
Number of visits by old patients in Out-patient Clinic.....	3,968
Total number of visits.....	4,333
Patients admitted to Lane Hospital.....	240
Operations performed in Lane Hospital.....	214
Plaster dressings applied in Lane Hospital.....	86
Deaths.....	1*

*Coroner's Case

OTORHINOLARYNGOLOGY SERVICE

Number of visits by new patients in Out-patient Clinic.....	622
Number of visits by old patients in Out-patient Clinic.....	8,130
Total number of visits.....	8,752
Patients admitted to Lane Hospital.....	571
Operations performed in Lane Hospital.....	458
Deaths.....	1*

*Coroner's Case

DIVISION OF ANESTHESIOLOGY

Anesthetics administered to private surgical patients.....	3,039
Anesthetics administered to clinic surgical patients.....	1,635
(Local anesthetics administered by surgeons not included here)	
Cases used for instruction to students of Medicine.....	600

GENERAL SURGICAL ANESTHESIA

<u>Type of Anesthesia</u>	<u>Number of Private Cases</u>	<u>Number of Clinic Cases</u>
General	1,737	1,145
Local	1,175	307
Spinal	720	246
Intravenous	454	185
Rectal	95	31
Caudal	33	18
Total	4,214	1,932

OBSTETRICAL ANESTHESIA

<u>Type of Anesthesia</u>	<u>Number of Private Cases</u>	<u>Number of Clinic Cases</u>
Caudal	1,172	378
General	120	539
Total	1,292	917
Total Surgical and Obstetrical Anesthetics	5,506	2,849
Total Surgical and Obstetrical Anesthetics administered to private and clinic cases.....8,355		

Emile Holman, M.D.
Professor of Surgery

DEPARTMENT OF PEDIATRICS

Perhaps the most important event of the year in this Department has been a gift of \$10,000.00 from Mrs. Richard H. Shainwald and Mr. Walter Heller for the construction of a new nursery unit for newborn infants. The present nurseries are not only inadequate but they are badly placed in relation to traffic in the hall of the third floor. The position proposed for the new nurseries avoids this difficulty by utilizing the east wing which is a dead end and can be effectively isolated. Our plans call for three main nurseries for full-term babies, one especially designed for prematures, an observation nursery and one for overflow and emergencies. There is also an examination room for physicians, something which is lacking in the present set-up and is badly needed. Actual construction is expected to begin very soon, and, we hope, to be completed and ready for occupancy early in December.

I regret to report that we have not yet been able, for financial reasons, to occupy the surgical ward for children, which was constructed and equipped nearly two years ago. This is a serious matter because of the urgent need for more pediatric teaching beds and also because recent developments in surgery of congenital heart disease have brought a large and still increasing number of patients to us for operation. The magnitude, actual and potential, of the latter problem has grown to a point where the establishment of a special cardiac unit is under discussion.

Mr. Brayton Wilbur has again enlarged the free bed fund for children which he established a few years ago in memory of his brother, E. P. Wilbur. Mrs. S. M. Haslett and Mr. Edward Morgan Mills have continued their contributions to their respective free bed funds and the employees of the late Mr. Haslett made a special memorial gift to the former. For these generous donations, I wish to express the gratitude of this Department.

The National Foundation for Infantile Paralysis, Inc. has continued to support the research project in poliomyelitis which is now in its eighth year.

Again I take this opportunity of expressing the gratitude of the Department to all its members and to the Administration for their loyal and effective cooperation.

Harold K. Faber
Pediatrician-in-Chief

DEPARTMENT OF OBSTETRICS & GYNECOLOGY

Lane Hospital Deliveries..... 1056 (12 sets of twins)

Spontaneous..... 537
Operative..... 478
Caesarean..... 41

Mortality:

Maternal..... 0
Fetal..... 37
In utero..... 13
Intrapartum..... 7
Postpartum..... 17

Stanford Hospital Deliveries..... 1497 (19 sets of twins)

Spontaneous..... 102
Operative..... 1261
Caesarean..... 114

Mortality:

Maternal..... 0
Fetal..... 42
In utero..... 20
Intrapartum..... 7
Postpartum..... 15

Maternal mortality in the combined obstetrical service was none in 2553 patients. The fetal mortality on the clinic service was 37 as compared with 42 last year. Prematurity was the cause in the majority of cases. On the Stanford Obstetrical service the fetal mortality increased from 27 to 42. There were 41 Caesarean sections in 1056 deliveries on the clinic service and 114 in 1497 deliveries on the private service. Clinic deliveries showed an increase of 180 patients over the previous year and private deliveries increased by 296 over 1945-46, a total of 476 more deliveries on the two services.

LANE GYNECOLOGICAL WARD

Patients cared for..... 350

Operations:

Major..... 63
Minor..... 106
Cystoscopies..... 8
Radium treatments..... 70
X-ray treatments..... 2

Mortality:

Patients..... 3 (2 uremia and cancer; 1 toxic encephalopathy PID)
Abortions and ectopics..... 12 (9 abortions; 2 ectopics; 1 stillbirth)

Our Gynecological service at Lane shows an increase of 17 patients cared for this year as compared with the previous year (350 as compared to 333). Patient fatalities were due to causes given above.

Our Laboratory prepared and studied pathologic tissue material as follows:

Gynecological and Obstetrical specimens.....	1580
Research specimens.....	150

A total of 551 Friedman Tests for pregnancy were run for the benefit of clinic and private patients during the year.

L. A. Emge, M.D.
Obstetrician and
Gynecologist-in-Chief

DEPARTMENT OF RADIOLOGY

Director: R. R. Newell, M.D. - On leave since May 1, 1947.

Associates: Edward Leef, M.D. - Resigned December 31, 1946.
Frank Windholz, M.D.
Evelyn Siris, M.D.

Resident: James T. English, M.D.

Assistant Residents: Merrill Sisson, M.D.
Sydney Foster, M.D.
William Picard, M.D.
Walter Hartzell, M.D. - Since July 1, 1947.
Charles Duisenberg, M.D. - Since July 1, 1947.

Statistics for the year ending August 31, 1947

	<u>DIVISION OF DIAGNOSIS</u>						
	<u>PRIVATE</u>			<u>CLINIC</u>			
	<u>O.P.</u>	<u>Hosp.</u>	<u>Total</u>	<u>O.P.</u>	<u>Hosp.</u>	<u>Total</u>	<u>TOTAL</u>
Case Visits	5,640	2,963	8,603	4,964	2,603	7,567	16,170
Radiographs							
Except dental							
Films	18,634	12,196	30,830	19,405	11,313	30,718	61,548
Dental Films	959	417	1,376	2,406	402	2,808	4,184
TOTALS	19,593	12,613	32,206	21,811	11,715	33,526	65,732

There were 5,855 fluoroscopic examinations besides those done in the Medical Clinic by the clinic doctors. Routine chest films on nurses, employees, and medical students account for 1,088 of the "private out" cases.

In terms of patients examined, this year shows an increase of 401 patients, or 2 $\frac{1}{2}$ % more. Accordingly, the films used increased from 3.7 to 4.1 per case visit.

With the removal of Mr. Dassonville's offices, two rooms became available which were adapted for a new radiographic room and for dressing rooms. A new 200 m.a. General Electric diagnostic machine was installed.

The previous staff room has also been remodeled for use as a lecture room and study room for consulting physicians and residents.

DIVISION OF THERAPY

Patient Visits for X-ray or Radium Therapy

<u>PRIVATE</u>			<u>CLINIC</u>			<u>TOTAL</u>
<u>O.P.</u>	<u>Hospital</u>	<u>Total</u>	<u>O.P.</u>	<u>Hospital</u>	<u>Total</u>	
4,026	765	4,791	3,193	429	3,622	8,413

This is a 5% decrease in the private work and a 1½% decrease in the Clinic work.

456 new patients were accepted for therapy under the private service and 326 were accepted under clinic service.

Follow-up examinations were made on 987 private patients, 53 more than last year, maintaining the ratio of 2.1 to the number of new private patients accepted.

499 follow-ups were done in the X-Ray Department on clinic patients. 1,312 follow-ups were done on clinic patients in the Tumor Clinic. These totals are 68% greater than the clinic follow-up visits for last year and equal to the visits for two years ago.

There were 280 initial visits to the Tumor Clinic. This shows an increase of 6% over last year.

USE OF THE SEVERAL EQUIPMENTS

Treatments Given

	<u>Radium</u>	<u>Contact Therapy</u>	<u>High Voltage</u>	<u>Supervoltage</u>
Cancer	137	529	4,329	853
Benign	32	936	1,475	0

Frank Windholz, M.D.
Acting Director
Department of Radiology

DEPARTMENT OF PATHOLOGY

During the fiscal year there were 987 surgical specimens from the Clinic Services and 1259 from the Private Services. The number of specimens examined for both the Clinic and the Private service exceeds that of last year. Microscopical study was made of all specimens.

Exclusive of autopsied stillborn and newborn infants, there were 47 clinic autopsies and 76 private autopsies, a total of 123, and an increase of 13 over last year. The percentage relative to hospital deaths was higher.

The following table shows the percentage for the various services calculated after eliminating autopsied stillborn and newborn infants and coroner's cases from the statistics.

<u>SERVICE</u>	<u>DEATHS</u>	<u>AUTOPSIES</u>	<u>PERCENT</u>
Medical.....	33	24	72
Obstetrics & Gynecology (Exclusive of Infants).....	7	5	71
Pediatrics.....	11	9	81
Surgical.....	19	9	47
Private.....	<u>166</u>	<u>76</u>	<u>45</u>
TOTAL.....	236	123	52
TOTAL (Including infants and stillborn).....	<u>61</u>	<u>35</u>	—
	297	158	53

	<u>D</u>	<u>A</u>
Pediatric Newborn	8	7
Clinic Stillborn	30	21
Private Stillborn	<u>23</u>	<u>7</u>
	61	35

Alvin J. Cox, M.D.
Department Executive

LABORATORIES

The following is a numerical expression of the work done in the Laboratories during the year ending August 31, 1947:

	<u>Stanford Hospital Laboratory</u>	<u>Clinical Laboratory</u>
Urines.....	7,260	4,148
Urines (partial examination).....	.....	7,017
Blood Counts.....	7,363	8,608
Blood Counts (partial examination).....	.....	1,018
Feces.....	575	308
Gastric Contents.....	63	.....
Cerebrospinal Fluids.....	228	388
Sputa.....	75	.....
Miscellaneous examinations.....	454	50
Blood Chemical examinations.....	5,367	21

The number of Wassermann tests for the year was..... 8,847
The number of Colloidal Gold tests for the year was..... 1,052
The number of Hinton tests for the year was..... 7,795

Harry Wyckoff, M.D.
Director

BACTERIOLOGICAL LABORATORY

During the last year the laboratory examined 9,069 specimens. Investigation in hemolytic streptococcal disease has been carried on throughout the year under the auspices of the Commission on Acute Respiratory Infections, Army Epidemiological Board, Office of the Surgeon General, U. S. Army.

Lowell A. Rantz
Director

BASAL METABOLISM AND ELECTROCARDIOGRAPH LABORATORIES

	<u>1944-45</u>	<u>1945-46</u>	<u>1946-47</u>
Clinic basal metabolism tests.....	680	649	745
Private basal metabolism tests.....	618	608	533
Total.....	1,298	1,257	1,278
Clinic electrocardiograms.....	1,342	1,190	1,407
Private electrocardiograms.....	1,115	1,007	977
Total.....	2,457	2,197	2,384
Total number of patients.....	3,755	3,454	3,662

PHYSICAL THERAPY DEPARTMENT

The activities of the Physical Therapy Department have centered around the training of technicians and the routine treatment of patients.

The staff of the department has consisted of the Director, W. H. Northway, M.D.; the chief technician, Miss Jeanne Hall, a technician, a student technician and a ward helper. The technical staff has again been handicapped by lack of personnel. Mrs. Elba Freeman, technician, resigned January 20, 1947 and it was impossible to replace her until August 8, 1947, when Miss Sophia Okamoto, a graduate of the Mayo Clinic School for Physical Therapists, joined the staff. During the time the department was short of technical help, the work was carried on satisfactorily through the added effort of Miss Jeanne Hall and she deserves special mention for her faithfulness during this trying period. Mrs. Agnes De Bord replaced Miss Jean Tagrin on December 11, 1946 as a ward helper.

The Director did not attend the Annual Meeting of the American Congress of Physical Medicine in September of 1946 as the date conflicted with the postgraduate course of our own school in which the Director participated with Dr. Faber in a discussion of the treatment of Poliomyelitis and an evening program with Dr. King and Dr. Davison on the treatment of Arthritis.

The Director attended a symposium on the Education of Physical Therapists held at the Annual Meeting of the American Physiotherapy Association in Asilomar, California, July 12, 13th 1947.

The Director supervised and participated in the postgraduate course for physicians on the treatment of Poliomyelitis given at Stanford University on July 14th and 15th and at Childrens Hospital, San Francisco, the morning of July 16th and at Stanford Hospital the afternoon of the same day. This course was under the auspices of the Department of Physical Therapy at Stanford University and the National Foundation for Infantile Paralysis, Inc. The guest speakers were Dr. Miland E. Knapp of the University of Minnesota, Dr. Jesse Wright of the University of Pittsburgh and Drs. Edward Shaw and Lucille Eising of the University of California and Childrens Hospital.

The Director also participated in a postgraduate course given for physical therapists during July 14th to August 2nd, 1947 at Stanford University.

The unit for the convalescent care of poliomyelitis continued to operate and six patients were treated during the year. It is interesting to note that most of these cases were brought in from foreign countries.

An Ille Whirlpool bath was added to the department equipment, a gift of a generous donor.

Fourteen student physical therapists have served an apprenticeship of a month or six weeks in the department during the past year.

A new activity was added to the department during the year when Miss Constance Arnold was added to the hospital staff on October 14, 1946 as an occupational therapist. Formerly, this activity was under the Social Service Department. It rightly belongs under the division of physical medicine and we are happy to have Miss Arnold with us. An analysis of the patient visits in occupational therapy will be appended to this report.

There was an increase in patient load in physical therapy during 1946-47 in spite of the lack of personnel which speaks very highly of the efforts of Miss Hall.

With the added staff we are looking forward to a greater increase during 1947-48.

An analysis of cases is appended to this report.

W. H. Northway, M.D.
Director of Physical Therapy

TOTAL NUMBER OF PATIENTS - PHYSICAL THERAPY

Total number of patient visits..... 6,409

Out-patients.....	3,727
In-patients.....	2,834
Clinic.....	2,116
Private.....	4,445
Men.....	1,955
Women.....	4,215
Children.....	391

OCCUPATIONAL THERAPY DEPARTMENT

Total number of patient visits..... 363

Psychiatric.....	131
Children.....	169
Surgical.....	12
Medical.....	22
Bone & Joint.....	14
Private.....	13
Out-patients.....	2

Total number of treatments..... 3,513

Psychiatric.....	1,547
Children.....	1,029
Surgical.....	195
Medical.....	236
Bone & Joint.....	251
Private.....	209
Out-patients.....	46

Type of Treatments

Functional.....	190
Psychiatric.....	1,547
Adjustment to Hospital & Illness.....	1,776

SOCIAL SERVICE DEPARTMENT

The work of our department has continued in the usual medical social work pattern, our five workers having interviewed the following:

New Patients.....	5,979
Old Patients.....	<u>2,576</u>
Total Patients.....	8,555

Total services on behalf of patients...	19,968
Convalescent care arranged for.....	65
Home visits made to.....	1,116

We wish to thank the San Francisco Guild for Crippled Children, Avery-Fuller Foundation, and Sunbeam Society, who have responded very generously to our many requests for financial assistance when parents have been unable to pay for care for their children. These private organizations pay for hospital or convalescent care for children up to the age of twenty-one. The public organizations (California Crippled Children Services and San Francisco Crippled Children Services) have been most cooperative in assuming responsibility for care when the patients' diagnoses come within their program.

DIETARY DEPARTMENT

During the year of 1946 and 1947 the price of food has shown a steady increase and has thus kept our meal cost very high.

Mrs. Ruth Pettinger and Miss Margaret Glimp joined our Dietetic Staff at the completion of their Dietary Internship. Seven other students were trained during the year.

We combined the food service of the two units on the fourth floor Stanford and are serving all trays from the one kitchen thus enabling us to save some personnel.

Nutrition rounds on the Medical Wards have continued to be educational and interesting and it is felt that they are very worthwhile.

An instruction booklet on formula preparation was prepared and an explanation is given all new mothers on the Maternity Wards.

Little was bought in the way of equipment this year. We purchased a new Hobart Mixer which is a wonderful improvement for our kitchen. A new gas automatic toaster was installed in the Nurses' Dining Room.

We hope that in the coming year the work of our department will be an asset to the organized and interrelated work of the various departments in the hospitals.

MEALS SERVED

	1945-46	1946-47
Lane Patients, regular house diets.....	87,372	89,369
Lane Patients, special diets.....	40,474	36,802
Stanford Patients, regular house diets.....	139,753	155,902
Stanford Patients, special diets.....	26,668	29,345
Nurses, Employees and House Staff.....	225,070	232,148
Special Diet Laboratory		
Regular Meals.....	51,798	43,984
Special Diets.....	2,859	1,997
Total Meals.....	573,994	589,547
Average Daily Meals.....	1,571	1,615
Total patient meal count, 1945.....	294,615	
Total patient meal count, 1946.....	294,267	
Total patient meal count, 1947.....	311,418	

PATIENTS INSTRUCTED IN FOOD CLINIC

	1945-46	1946-47
Clinic patients.....	1,448	1,523
Hospital patients.....	263	379
Private patients.....	62	63
Total.....	1,773	1,965

In addition, 237 patients were instructed in class form rather than private or individual instructions, in the Prenatal Clinic.

DEPARTMENT OF NURSING

On January 1, 1947 graduate nurses and non-professional workers in the Nursing Department were placed on a 40-hour work week. The additional number of nurses which it was estimated would be needed were not available except for a short period.

A very large percentage of the graduates employed came from the East and Mid-west, and until other states met the salaries which California was paying, we enjoyed a considerable advantage. However, as other states increased salaries, many nurses returned east and fewer nurses came west.

In order to continue to care for patients and keep beds open in the Hospital, particularly during the vacation months, it became imperative to employ additional workers. A group of 30 Nursing Aides, most of whom were high school graduates, were instructed in non-technical care of patients. This enabled nurses to concentrate on the care of the acutely ill and to give medications and treatments requiring more skill. The Nursing Arts Instructors taught an elementary and advanced series of classes to all Aides and to the Auxiliary Worker who were on the payroll before the new plan was instituted. These classes included the following: principles and methods of cleaning; transporting patients to X-ray, clinics, operating rooms; checking of clothing; measuring and recording fluid intake and output; care of valuables; care of clothes; giving and removing bed pans and urinals;

preparation of patients for meals and for sleep; serving food trays; feeding patients; making empty and occupied beds; bed baths; tub baths; arrangement of pillow; application of binders; and morning and evening care of patients. Not only were our Nursing Aides given instruction, but they in turn gave return demonstrations of procedures taught, and were supervised in their care of actual patients on the wards and private floors. This continuous teaching and close supervision was possible because a spring class of student nurses was not admitted this year. A distinctive uniform was selected for the Aides, and they were no longer called by their given names, but rather "Miss Jones," "Miss Brown", etc.

Our Nursing Aide Corps has eased the Nursing Service problem considerably. However, with the reduced number of nurses, and the five-day week it is necessary for nurses to work the evening and night duty shifts more frequently. The turnover among the graduate general duty nurses this year has been 130%.

During March Stanford Hospitals had the largest number of operations in any one month in its history. There were 603 operations performed. The Operating Rooms are now open 24 hours daily, eliminating the necessity of graduates being "on call" between 7:00 P.M. and 7:00 A.M.

A series of orientation classes for new nurses has been resumed. They had been temporarily discontinued during the war.

Since housing remains an acute problem, most of the graduate nurses are living in the Nurses' Residence. We are very fortunate in having so large a Residence, as this is an important factor in securing graduates.

In all probability, the Nursing Aide Program is here to stay. It is our hope that the turnover among this group will be less than it has been among nurses, thereby tending somewhat to stabilize the nursing service.

Last September and October, the Director of Nurses visited the following hospitals: Wesley Memorial, Billings and Chicago Lying-In, Strong Memorial, Royal Victoria, Columbia Presbyterian, Cornell, Massachusetts General, Childrens Hospital (Boston), Yale, and the Medical College of Virginia. The nursing shortage was found to be much greater than it was at Stanford at the same period. Some hospitals had newer buildings and newer equipment, but in general the housekeeping, maintenance, and food in all of the above were not equal to that at Stanford. A central oxygen room with one person always on duty to deliver and collect oxygen equipment was the rule rather than the exception. Some of these hospitals had recovery rooms where all patients were taken for an 8-24 hour period immediately following surgery. Some had oxygen piped in to each patient's room, eliminating the necessity of transporting heavy equipment.

The tray-vveyor system and pneumatic tube systems from the Pharmacy and Supply room found in newer buildings are time-savers, and perhaps may be included in a new Stanford Hospital one day. The morale of the employees, however, was no better, in fact, not as good, in my opinion as it is at Stanford, and morale certainly has an effect upon patients. Comparison made me happy to return, and proud to be associated with Stanford.

Grace E. Ringressy, R. N.
Director, Nursing Service

STAFF

The Residents for the year were: Dr. Sergius Bryner, Medicine; Dr. Jack P. Covert, Surgery; Dr. James A. Klinefelter, Dr. Fred Hansen, Obstetrics & Gynecology; Dr. Barbara C. Halpern, Pediatrics; Dr. Heinrich W. Kohlmoos, Ear, Nose & Throat; Dr. Nelson C. Bell, Eye; Dr. Bayles Kennedy, X-ray;

The Assistant Residents were: Dr. Richard H. Barr, Dr. Claude P. Callaway, Dr. Robert P. Gilbert, Dr. Clyde C. Greene, Jr., Dr. Philip L. Pillsbury, Dr. Thomas F. Walker, Jr., Dr. Robert W. Wells, Dr. John M. Read, Dr. William H. Clark, Medicine; Dr. Robert E. Berner, Dr. William R. Eastman, Jr., Dr. Alex S. MacKenzie, Dr. Arnold A. Nutting, Dr. Luis Arismendi, Dr. John Abendroth, Dr. James Martin, Surgery; Dr. Harold Hanzlik, Dr. Karl L. Schaupp, Dr. John B. Schaupp, Obstetrics and Gynecology; Dr. Elizabeth J. Bradley, Dr. Mary M. Griffin, Dr. Theodore T. Lerch, Dr. Gordon F. Williams, (S.F.), Pediatrics; Dr. John W. Hanbery, Dr. August Meier, Dr. Vernon J. Maino, Orthopedics; Dr. Albert G. Rockwell, Ear, Nose & Throat, Dr. Milton H. Van Riesen, Eye; Dr. Charles S. Harrod, Genito-Urinary; Dr. Sidney E. Foster, (S.F.), Dr. William Picard, Jr., Dr. Merrell A. Sisson, Dr. Ted English, X-ray; Dr. Herbert Hultgren, Pathology; Dr. Allen B. Bell, Dr. Richard Thompson, Dr. Robert Leggett, Anesthesiology; Dr. James Yes, Neuropsychiatry;

The Interns were: Dr. Leon R. Cole, Dr. William P. Cregar, Dr. John M. Harter, Dr. Thomas B. Hauschild, Dr. Millard H. McLain, Dr. Raymond R. Ross, Medicine; Dr. James G. Holmes, Dr. George W. Magladry, Jr., Dr. Wayne G. Price, Dr. Robert F. Schell, Dr. Charles H. Secor, Dr. Donald C. Van Dyke, Surgery; Dr. John W. Hartman, Dr. Donald E. King, Dr. Vladimir A. Yabolkovsky, Obstetrics & Gynecology.

OUT-PATIENT DEPARTMENT

The Out-patient department enjoyed a period of great activity during 1946-47. Total visits increased from 105,297 to 110,267, a difference of 4970 visits, which is a 4.7% increase. Expressed in terms of percent this is not large, but coupled with the adoption of the 40-hour week on January 1, which limited the number of days the clinics were open it represents considerable additional accomplishment. In 1945-46 the average daily visits numbered 344, while last year they averaged 405.4, an increase of 61 patients per day.

The clinics with the largest number of visits in order of the largest number were Medical, Children's and Women's. The latter showed the largest increase, which was 1549 over the previous year. Neuropsychiatric visits increased by 1085 which is remarkable. Surgical visits continued their decline which began with the year 1944-45.

Among the clinics that showed a decline are Dental, Luetic, Men's, Chest and Surgical.

While it is difficult to assign the reasons for the overall increases, it is presumed that changing economic conditions is the prime factor, although one wonders about this when it is observed that only 91 more new patients are reported than the previous year. A total of 10,177 new patients were reported for last year, 10,086 for 1945-46.

Commencing July 1, a full-time assistant resident was assigned to the Medical Clinic. This was a new procedure since formerly the staff changed periodically with no one left on to continue the routine and

more or less be responsible for the handling of traffic in the clinic. Dr. Charles Barnett was appointed the Chief of the Clinic, succeeding Dr. William Northway. Dr. Barnett began a reorganization of the scheduling of the patients. He is working towards establishing an appointment system which will speed the handling of patients, reduce waiting time, and eliminate idle time of the staff. To date his work is showing good results.

At the end of the year plans were being worked out to move the Arthritis Clinic to the space used by the ENT department. Arthritis visits have increased from 25 per month in the early part of the year to 139 for the month of August. Larger quarters are needed and the unused space in the ENT area is suitable.

Some reconstruction work was done in the Women's Clinic. Two new interviewing booths were set up, and one examining niche was re-established in order to facilitate ready passage between the sections. New benches were installed which increased the seating capacity. The entire clinic was repainted producing a brighter and cleaner looking work area.

As was stated earlier a 5 day, 40 hour week went into effect on January 1. Except for minor problems at the beginning no serious handicaps developed and by the year's end it was generally agreed that there was no reduction in the care of patients. Saturday emergencies were being handled at Lane Desk, and while there may be more activity there than formerly with clinic patients, no serious problems developed.

Increasing costs of operation were haunting the OPD. In order to counteract this trend the Eligibility clerks were instructed early in the year to attempt to fix higher fees on all new patients and rechecks. An average fee income of 85¢ was set as the goal, and while this goal was not achieved, a higher average than formerly was obtained.

The average monthly income for last year was \$11,011, while in 1945-46 it was \$10,526, a difference of \$485 per month. These amounts include Clinic fees, laboratory fees, X-ray charges, etc. While in themselves these figures are not significant, they do show how Clinic income has increased.

The only other physical change that took place was the replacement of the old theatre seats with reconditioned classroom benches that were obtained from the University at a relatively low cost.

Some refinements in our cashiering system were developed which resulted in elimination of a long line waiting at the cashier's cage and speedier dispatch of the patients to the various clinics. An attempt was made to improve the mechanisms of the cash register, but the cost was prohibitive.

Refinements in the handling of records in the record room and the extension of the open hours of that department to 10:00 P.M. has greatly improved the delivery of records to the clinics. Continued contemplated improvements will further improve this service.

The Out-Patient Department can be justifiably proud that with the increase in number of patient visits there has been no decrease in the high standard of care given those who come for medical attention. The department looks forward to an ever increasing volume of work and continuation of the high quality of attention to patients for which Stanford University Hospitals is noted.

Stanford University Hospitals

The visit statistics for the 1946-47 fiscal year as compared with previous years are as follows:

	<u>1943-44</u>	<u>1944-45</u>	<u>1945-46</u>	<u>1946-47</u>
Dental.....	1,914	2,081	1,613	1,319
Children's.....	15,467	15,721	17,220	17,877
Skin.....	3,416	4,054	4,323	4,490
Luetic.....	13,389	11,283	10,256	9,927
Neuropsychiatry.....	4,150	3,599	3,507	4,592
Medical.....	18,344	19,812	19,644	20,151
Bone & Joint.....	3,058	3,330	3,690	4,333
Men's.....	3,805	3,808	3,875	3,686
E.N.T.....	8,112	7,291	7,694	8,752
Eye.....	8,455	7,736	7,282	7,965
Surgical.....	12,063	11,001	10,319	9,904
Chest.....	1,260	1,090	1,038	886
Women's.....	13,971	14,091	14,836	16,385
Totals.....	107,404	104,897	105,297	110,267
Resident Visits.....	89,019	85,308	86,697	89,803
Non-residents.....	17,982	19,589	18,600	20,464
Average daily visits.....	349.5	343.9*	344.0**	405.4***
New Patients.....	9,533	9,916	10,086	10,177
Average daily new patients	30.9	32.5*	38.0**	37.4***

*The Out-Patient Department was open 305 days during 1944-45. This is determined as days open including Saturday as a whole day.

**The Out-Patient Department was open 306 days during 1945-46. This is determined as days open including Saturday as a whole day.

***The Out-Patient Department was open 272 days during 1946-47. This is determined as days open including Saturdays as a whole day from September through December.

Beginning January 1, 1947 the Out-Patient Department was closed all day Saturday.

PALO ALTO HOSPITALVISITING STAFF

Members of the visiting staff are composed of those members of the Palo Alto Medical Society engaged in active medical practice, appointed annually by the President of Stanford University upon recommendation of the Clinical Committee of Stanford University Medical School.

PALO ALTO HOSPITAL STATISTICS

<u>Patients Admitted</u>	<u>1945-46</u>	<u>1946-47</u>
Residents of Palo Alto.....	2,784	2,988
Non-residents.....	4,733	5,884
Total.....	7,517	8,872

Stanford University Hospitals

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PALO ALTO HOSPITAL STATISTICS (Cont.)

	<u>1945-46</u>	<u>1946-47</u>
STANFORD STUDENTS.....	272	387
Men.....	1,698	1,987
Women.....	4,463	5,466
Children.....	1,356	1,419
Births.....	1,609	2,216
Deaths.....	192	196
Patient Days.....	59,265	61,564
Daily Average number of patients.....	162	168
Income per patient day.....	\$11.29	\$14.25
Cost per patient day.....	\$ 9.97	\$13.53
Cost per patient day exclusive of X-ray and Laboratory.....	\$ 9.24	\$12.62
Percentage of occupancy, rooms.....	101.5%	104.5%
Percentage of occupancy, wards.....	96.3%	101.6%
Total occupancy percentage.....	99.6%	103.4%

OPERATING ROOM

Major operations.....	1,314	1,474
Minor operations.....	1,062	1,618
Eye, Ear, Nose and Throat.....	1,019	1,015
Plaster Dressings.....	146	97
Minor Emergencies.....	1,590	2,592
Obstetrical Patients.....	1,601	2,198

X-RAY DEPARTMENT

Number of Patients.....	1,806	2,418
Number of Visits.....	3,737	4,430
Total Units of Service.....	11,756	15,864

LABORATORIES

Laboratory Examinations.....	30,351	31,359
Autopsies - Hospital Cases.....	19	48

DIETETIC DEPARTMENT

Trays Served Patients.....	169,327	174,572
Total number of Meals served, patients and staff	220,755	235,084

ANATOMY

The full-time teaching and research staff for the current year consisted of Charles Haskell Danforth and William Walter Greulich, professors; Donald James Gray and Hadley Kirkman, associate professors; David Bassett and Robert Stuart Turner, assistant professors, and Robert Lewis Bacon, instructor. Richard Boies Stark and Fred Haven Draper gave full time during the autumn, winter and spring quarters. Sydney Frissell Thomas served on a part time basis throughout the year in both teaching and research. J. Ray Van Meter acted as a voluntary assistant in neurology during the spring quarter. William Hagins assisted in histology and neurology; Verona Hardy, Barbara Fitch and Russell McFall assisted in practical anatomy. At the end of the year Dr. Bacon was promoted to assistant professor and Dr. Gray was granted sabbatical leave for 1947-8. On July 1, Dr. Stark resumed work in plastic surgery at Cornell University Medical College and Dr. Draper became senior resident in pathology at the Santa Clara County Hospital.

After the eclipse of the war years, it is gratifying to have more regular students with the time and disposition to take an active interest in phases of the work which are not definitely perscribed. Since the high quality of the school is to a considerable degree dependent on such students, and it is from them that future faculties will largely be drawn, their current reappearance in greater numbers is reassuring.

Except for adding a brief course in problems of morphogenesis given by Dr. Bacon, the only significant change in teaching this year has been the introduction of some formal instruction in elementary roentgenology. While in the past, x-ray films have been available, and used to some extent in connection with the dissection, no regular presentation of this aspect of anatomy has previously been attempted. During the present year, Dr. Thomas has introduced the class, in small sections, to elementary aspects of x-ray and fluoroscopic interpretation.

On the research side, Dr. Thomas has been concerned with studies of lung densities, with results which seem to justify further investigation of mineral components in consolidated lung tissues. He has also cooperated with Dr. Greulich and Dr. Gray in their x-ray work and, through his efforts, the department is indebted to the General Electric Company for another x-ray transformer and control stand, plus half the cost of its installation, and the loan of a berillium-windowed x-ray tube and transformer. Dr. Thomas is accumulating materials for an x-ray atlas of anatomy.

On behalf of one of the national foundations interested in promoting cooperation in scientific fields, Professor Greulich spent a large part of the autumn quarter visiting the universities and medical schools of Australia and New Zealand. While there he gave a series of lectures, and the auspices of their post graduate medical committees, before local branches of the British Medical Association in Townsville, Brisbane, Melbourne, Sydney and Perth in Australia, Auckland, Wellington, Christchurch and Dunedin in New Zealand. As a participant in a coordinated investigation of Micronesian anthropology, sponsored by the Pacific Board of the National Research Council, Dr. Greulich is spending most of the present summer making a study of the physical and nutritional status of the native children of Guam, after which, he plans to make a preliminary survey of children in Hiroshima and Nagasaki, before returning to the campus for the autumn quarter. During the year Dr. Greulich served on the following committees and attended one or more meetings of each: committee on race relations, American Association of Physical Anthropologists.

ogists (chairman); committee on child development, National Research Council; inter-university committee on collaboration in research on human development; national advisory committee of the Cleveland Health Museum; research coordinating committee, American Society for the Study of Sterility; executive committee and committee on nomenclature, American Association of Anatomists. He has continued as director of the Brush Foundation, served as consultant on contraceptives, Council of Physical Medicine of the American Medical Association and attended a meeting of the Atomic Casualty Commission in Washington.

Professor Kirkman has discovered that the peculiar granular cells found in transitional epithelium of the rat appear only in those animals whose bladders are infested by a worm which occurs commonly in rats. The cells have been studied by histochemical methods and their relation to blood cells and connective tissue elements is of great importance in connection with certain controversial questions in hematology, as was shown by the interest which Dr. Kirkman's paper aroused at meetings of the Anatomical Association in Montreal. A ring of bipolar cells in the proximal portion of the anal canal of the monkey, not visible in ordinary preparations but clearly revealed by the Bodian silver technique, has been studied with the aid of a student, Pauline Ow. These cells are morphologically distinct from ordinary argentaffin cells but the Bodian technique fails to differentiate between the two, and is thus shown to be less selective than had been supposed. Further histochemical studies are in progress. A comparative study of selected muscles from 65 cadavers has furnished evidence that agonal contractions of the extrinsic muscles of the eye resemble contractions in skeletal muscles of the lower vertebrates and invertebrates more closely than do agonal contractions of other human muscles. The evidence supports the hypothesis that in man the extrinsic eye muscles are more primitive than other skeletal muscle. With Dr. Bacon and V. S. Matthews of the first year medical class a study is being made of renal tumors and other pathologic kidney changes appearing in golden hamsters treated over long periods with estrogens and sesame oil. Since both of the substances are used clinically, the practical importance of the matter is apparent. A preliminary paper is ready for publication. At meetings of the American Association of Anatomists, Dr. Kirkman presented papers and demonstrations from his own work and that of D. C. Tanner, a student collaborator.

Professor Gray has completed his study of the intrinsic nerves of the testis, the results of which are appearing in the Anatomical Record. During the year he gave considerable time to the preparation of a series of embryos and fetuses to be used in a study he and Dr. E. D. Gardner of Wayne University are making on the development of articulations. This work was begun here several years ago and during his sabbatical leave Dr. Gray will be able to devote full time to it without the interruptions of teaching and committee work. For the last two quarters, Verona Hardy, a fellow in physical medicine, has worked under Dr. Gray's direction trying to determine to what extent removal of selected intrinsic muscles from the spine of new-born rats will be compensated for during development, and to what extent it will result in scoliosis or other deformities. At the present writing, it appears that both effects occur.

In October Professor Bassett gave four lectures to the University of California and Stanford residents in ophthalmology. During the winter he gave a short, intensive course in neurology to a selected group of neuropsychiatrists who are taking a three year post graduate course under the direction of the Veterans' Administration. In research Dr.

Bassett has continued his studies on the finer vascular architecture of the thyroid gland, and further perfected techniques for embedding anatomical sections in plastics. Two articles on the subject have been accepted for publication. In the course of a study on the origin of certain cells in the human corpus luteum, he found that fresh corpora of early pregnancy, removed surgically and placed in colchicine before fixation, give indication of waves of mitotic activity in the theca interna such as to suggest that this layer may continue to supply cells to the corpus luteum for a considerable period. The role of these cells has long been a moot question in anatomical discussions.

Professor Turner has spent a good part of his research time in perfecting techniques for recording transmission of impulses in nerves and breaking them down into their components. Mr. William Hagins, a first year medical student, assisted in this work and became sufficiently interested to stay in the department another year. Both Dr. Turner and Mr. Hagins are at Pacific Grove this summer working on conduction in large single preganglionic and postganglionic nerve fibers of favorable invertebrates. With Dr. Fuhrman of the Department of Physiology a comparative study has been made of the effects of curare and the Triturus toxin discovered by Dr. Twitty and his coworkers.

Dr. Bacon has now completed a study of changes in reticular fibers in the heart of the mouse through its entire life span and has a paper on the subject ready for publication. Similar studies, with special reference to age changes in the ratio of muscular to reticular fibers in the human and rat heart, are in progress. With the cooperation of several students, he has been checking the effects of zinc chloride and carcinogenic agents on the testis of the hamster, the effects of varying dosages of methylcholanthrene on the production of tumors in mice, and the interaction of developing endoderm and mesoderm in amphibian embryos. These problems all center around the general question of the regulation of growth processes.

Dr. Stark attempted to clarify certain problems which came to his attention in plastic surgery work during the war. To that end he made a study of the distribution of finer vessels in the skin of several laboratory animals, using histological, fluoroscopic and x-ray techniques, and experimented with skin transplantation in rats, guinea pigs and rabbits. In the experimental animals he made considerable progress with methods for determining the most favorable time for retransplantation of skin tubes. His results were presented before the Faculty Research Club and at two seminars. Some of his findings will probably be published.

Professor Danforth has continued most of the activities mentioned under his name in recent reports. He is a member of the committee on nomenclature of the American Association of Anatomists, and of a similar committee of geneticists which is trying to standardize terminology in the field of human heredity. He attended one meeting of geneticists called to Washington by the Atomic Casualty Commission, a report on which is now in press. He has published two papers on polydactyly during the current year.

CHARLES HASKELL DANFORTH
Professor of Anatomy

BACTERIOLOGY AND EXPERIMENTAL PATHOLOGY

The department staff consisted of Edwin William Schultz and Charles Egolf Clifton, professors; Sidney Raffel, associate professor; S. Cottrell White and Robert Henry Bedford (autumn and winter), research associates; Helen S. Thayer, Tillie M. Horkey (autumn and winter), Harriet M. Behring (spring and summer), Eileen D. Moran (spring and summer), teaching and research assistants; Waldo H. Hanns, Benjamin S. Page, Mary R. Khan (autumn), John B. Enright (autumn), James H. Nakano (spring and summer), Carl M. Johnson (summer), Lloyd R. Lundsten (summer), research assistants; Roberta R. Bell, department secretary.

As in years past, formal courses were given in general bacteriology, medical bacteriology, immunology and serology, general pathology, filtrable viruses, bacterial physiology, and advanced medical bacteriology, all but general bacteriology being required of bacteriology majors. With the close of the current year, the departmental program of courses for those majoring in the field will be open to graduate students only. Indeed, most of the students during the current year were of the graduate level. Even now the assignment of space and facilities to students ready to begin research work has become a problem, one which will become more acute as the number of post-war students who reach graduate level increases. Adequate direction of the numbers who wish to undertake research work has also become a problem for a staff as limited as ours. While only those students who do good work in the formal courses are admitted to thesis or other research work, the number who are applying themselves well and are succeeding in their work is gratifyingly large. This increase in the number of eager students, however, places a heavy load on the staff. It is a small staff for the area of formal and informal instruction the department is obliged to cover to prepare students adequately for work in the field. I would be amiss in my report were I to omit reference to the situation.

Professor Clifton continued his studies on the relationship between respiration and assimilation of microorganisms in suspensions. This work was carried out in part with the technical assistance of Mrs. Mary R. Khan and Mr. James H. Nakano. Particular emphasis was placed on the determination of more exact carbon balances for the amount of carbon dissimilated and assimilated in suspensions of yeast under carefully controlled conditions. With Mr. Wilbur H. Swanson, he studied the efficiency of assimilation during the growth of yeast. Certain aspects of these studies suggested that an unknown growth factor may markedly stimulate growth and respiration in yeast. This problem is now being investigated further with the assistance of Miss Charlotte J. Davidson. With Mr. James B. Nakano, he began studies on the possibility of inducing biochemical mutants in bacteria by means of ultraviolet irradiation, and with Mr. Lewis W. Jones, he studied the metabolism of certain species of anaerobic bacteria. He also carried out studies on the staining of bacteria and on chromatographic methods for the separation and quantitative determination of fatty acids in a mixture.

Dr. Clifton continued to serve as editor of the Annual Review of Microbiology and as Associate Editor of the Journal of Bacteriology. An invitation to present a paper at the Fourth International Congress of Microbiology in Copenhagen this summer had to be declined

because of the travel involved.

Professor Raffel continued his studies on the fundamental aspects of resistance and allergy in tuberculosis. In this work he was assisted by Messrs. Waldo H. Hanns, Benjamin S. Page, Lloyd R. Lundsten and Dr. Carl M. Johnson. It is work which has continued to be liberally supported by grants from the California Tuberculosis and Health Association, the National Tuberculosis Association and recently also by the Alameda Tuberculosis and Health Association. With Mr. Louis E. Arnaud, Dr. Raffel investigated the chemical components in *Coccidioides immitis* which are responsible for the infectious type of allergy induced by this organism; with Mr. John E. Forney, he studied the relationship of the lipids of poison oak extract to the production of the contact type of dermatitis; with Mr. Charles Dean Dukes, the relationship of the chemical components of the hemolytic streptococcus to the production of delayed hypersensitivity and rheumatic fever; with Mrs. Catherine C. Jarchow, the shift in antibody protein association in the serum during the course of immunization and with Mrs. Violette C. Sutherland, the possible role of streptococcal fibrinolysin in the dissolution of blood clots in vivo.

Dr. Raffel gave a talk on the fundamental and practical aspects of the immunology of tuberculosis to the staff of the Veterans' Hospital at Livermore, in October, and provided an exhibit showing the relationships of the chemical components of the tubercle bacillus to allergy and resistance in tuberculosis at the annual meeting of the National Tuberculosis Association held in San Francisco in June. He continued to serve as Associate Editor of the Annual Review of Microbiology, as Associate Editor of the Stanford Medical Bulletin, and as a member of the Board of Directors, and of the Case Finding Committee, of the Santa Clara County Tuberculosis and Health Association.

Professor Schultz continued work in the field of virus diseases. With Dr. S. Cottrell White, research associate, he investigated certain aspects of the poliomyelitis problem, particularly the characteristics of two mouse-adapted strains of poliomyelitis virus. With Messrs. John B. Enright and Robert B. Schultz, he continued work on the cultivation of strains of poliomyelitis virus in developing eggs and with Mr. Dudley B. Shean, studies on the tissue cell requirements of certain strains of poliomyelitis virus grown in tissue culture. The work on poliomyelitis was aided by a generous grant from Mr. Howard Frost. With Mr. Kelly H. Eldredge, Dr. Schultz studied the effect of varying the ingredients in a synthetic medium on the susceptibility of *Esch. coli* to homologous bacteriophages; with Miss Eileen D. Moran, the relationship between antigenic constitution and susceptibility to bacteriophage in *Esch. coli*; with Miss Harriet M. Behring, the antibiotic properties of *Bacillus laterosporus*; with Mr. Gene R. Duvall, the mutual antibiotic activities of certain spore-forming aerobes; with Mother Frances J. Danz, studies on a gelatinous variant of *Pseudomonas aeruginosa* and with Dr. Robert H. Bedford, research associate, studies on pyocyanin. During the year he wrote the section on "Viruses" for the *Cyclopedia of Medicine, Surgery and the Specialties*, and the section on "Infantile Paralysis" for a revision of the *Encyclopedia Britannica*. In June, he attended a meeting in Philadelphia of the American Board of Pathology, of which he is a trustee, and after that the centen-

nial meeting of the American Medical Association in Atlantic City, where he presented a paper on "The Present Status of Viruses and Virus Diseases" as part of a symposium on virus diseases. He visited several medical centers before returning from the East.

Dr. Chen Shao-po, a fellow under the American Bureau for Medical Aid to China, Inc., arrived late in May for a year's work in the department, in the field of virus diseases.

Edwin William Schultz
Professor of Bacteriology
and Experimental Pathology

MEDICINE

The past year has been one of reorganization: indeed it was not until recently that the full impact of the dislocations of war was felt. Our House Staff has been completely reconstructed with the development of a special Private Ward service. The medical out-patient department under the immediate supervision of Dr. C. W. Barnett is in process of reorganization with a full-time House Officer, new and improved appointment systems and laboratory routines. These changes should add greatly to the efficiency of the work. A series of laboratories on the fifth floor of the college building has been improved and will now accommodate some half-dozen additional workers. With the retirement of Dr. Harry Wyckoff, the laboratories of Clinical Pathology and Haematology are being reorganized under the supervision of Dr. Robert S. Evans.

The general scheme of teaching in the Department has been preserved unchanged. Our constant effort is to bring the entire staff into actual close contact with small groups of students. Even the senior members feel that their greatest usefulness can be achieved in this way, and unessential extra-curricular activities are avoided as far as possible. However, our staff, and especially the younger members are urged to attend important National medical meetings.

Our ever-present need of a new buildings, of a metabolism ward, of a contagious disease pavilion and a virus laboratory must be re-emphasized. Facilities for the study of isotopes in research and treatment are also imperatively necessary if modern standards are to be preserved.

Particularly successful during the past year have been the post-war fellowships. The holders without exception did creditable investigation, and it is clear that in the future we must have more such positions.

Numerous original articles were published by various members of the staff.

Respectfully submitted,

Arthur L. Bloomfield

Arthur L. Bloomfield, M. D.

OBSTETRICS AND GYNECOLOGY

The Department announces with deep regret the death of Dr. T. Henshaw Kelly, Associate Clinical Professor, on May 10, 1947, from coronary heart disease. Dr. Kelly was a member of this Department since 1934, and prior to joining this staff was a member of the Department of Medicine since 1921.

We also announce the death of Dr. Walter Schilling on December 16, 1946, from coronary heart disease. Dr. Schilling was indirectly connected with this Department in his capacity as statistician and for many years gave invaluable service in conjunction with experimental tumor research.

Dr. Chester L. Cooley was promoted to Assistant Clinical Professor. Dr. L. A. Emge will relinquish the chairmanship of the department as of August 30, 1947. Dr. Charles E. McLennan, at present Professor of Gynecology at the University of Utah Medical School, will succeed him.

Dr. Peter Koets will continue as Research Associate under the Agnes Lemme Schilling Fellowship.

The research activities of the department have been continued only on a limited basis owing to the lack of personnel. Dr. Emge has continued his studies of experimental tumor growths and Dr. Koets has continued his studies on the steroid hormones and hyaluronidase.

Attendance at the Women's Clinic has increased from 14,794 last year to 16,385 patients this year, including 5886 in the gynecological clinic, 8303 in the obstetrical clinic and 1576 in other divisions. The maternity service delivered 2553 patients, an increase of 65 over the previous year, with 1056 deliveries on the clinic service and 1497 deliveries on the private service. There were no maternal mortalities and the 79 fetal mortalities were largely due to prematurity and placental accidents. The Stanford Maternity Service at the San Francisco Hospital delivered 697 patients as compared with 482 last year, an increase of 208, without maternal mortality and with a fetal mortality of 34, two fewer than last year.

The Lane-Stanford gynecological service admitted 350 clinic patients for 63 major and 106 minor operations. Of the three fatalities, two patients died from cancer and one from toxic encephalopathy. The San Francisco Hospital gynecological service admitted 753 patients for 100 minor operations and 80 major operations. There was a mortality of 19 patients, principally due to terminal stages of cancer.

The gynecological laboratory processed and reviewed 1580 pathologic specimens and 150 research specimens. 551 pregnancy tests were run for clinic and private patients. There is an increasing demand for determinations of steroid hormones and their derivatives for clinical purposes and Dr. Peter Koets was called upon to divert time from his researches on these compounds to make such assays.

The department has received \$5,947.50 for various purposes through donations to the Lloyd Silverstein, Post-graduate, Emergency Cancer Research, Dr. Haman's Research, Dr. Emge's Cancer Research, and the Kelly Memorial funds.

LUDWIG AUGUSTUS EMGE
Executive Head

PATHOLOGY

The teaching staff consisted of Dr. Alvin J. Cox, Jr., Professor; Dr. David A. Wood and Dr. William H. Carnes, Associate Professors; Dr. Gert L. Laqueur, Assistant Professor; Dr. Lelland J. Rather, Instructor; and Dr. August C. Armanini, Teaching Assistant. The Resident staff was composed of Dr. William W. McLaughlin, Dr. Herbert Hultgren, Dr. Joseph Walsh, Dr. Paul Stratte, and Dr. Donald Bernstein. Dr. Alfred E. Gardner held a medical school fellowship. Three assistant residents from the Division of Radiology were given four-month training periods. In January, when Dr. Laqueur returned as Assistant Professor, the departmental faculty reached its full size for the first time since the War. All members of the staff participated in teaching and in the routine work of the department related to autopsies and surgical pathology.

A considerable assistance to the program for training specialists in pathology was afforded during the year by a gift from the American Cancer Society, which provides for two fellowships in the Department of Pathology each year for four years. It is to be hoped that more physicians will enter the specialty of pathology, where there is now a shortage of trained men.

Dr. Wood was very active in the work of the American Cancer Society, of which he is Secretary of the California Division, and National Professional Director of Region 6. He delivered eighteen talks to professional and lay groups on the subject of cancer. He continued to act as Civilian Consultant to the United States Naval Hospital in Oakland, as Branch Consultant to the United States Veterans' Administration and as a member of the advisory technicians committee of the California State Board of Health. He was Councilor of the International Association of Medical Museums, Secretary of the State Medical Association Cancer Commission, President and State Director of the Northern District of the Public Health League, Chairman of the Nominating Committee and Founding Fellow of the newly formed College of American Pathologists, and President of the Stanford Medical Alumni Association.

Dr. Carnes continued investigative work along three general lines, attempting to discover the etiology of sarcoidosis, elucidate the mechanism of acquired immunity to tuberculosis and throw light upon the pathogenesis of renal osteodystrophy as well as the underlying physiological mechanisms regulating reabsorption of bone. He also studied autopsy material from a group of cases of pneumoconiosis occurring in workers in the Diatomaceous Earth industry, and discussed the pathology of this condition at a meeting of the Santa Barbara County Medical Society. Dr. Carnes presented a paper on "Congenital Heart Disease in Adults" before the Section of Heart Disease of the local division of the National Tuberculosis Association.

Dr. Laqueur has been making special anatomical examinations of the endocrine organs in endocrine diseases, with special emphasis upon the hypophysis. He has begun a study of the fate of androgens injected into patients with carcinoma of the breast.

Dr. Rather in association with Dr. Addis and co-workers has made numerous observations upon the distribution in the kidney of parenterally injected proteins, and the digestive changes which protein undergoes in this organ.

Dr. Cox has continued the detailed examination of the pathological anatomy of the stomach in selected cases, with particular attention to the association of changes with anemias. Further work with the carcinogenic agent, acetaminofluorene, has examined the effect of this substance upon successive generations of animals. Dr. Cox has also continued an analytical study of the lipoids in arteries in relation to various diseases and nutritional states. He presented a paper on "Hyperplasia of the Gastric Mucosa" at the organizational meeting of the Western Society for Clinical Research, and a paper on "The Stomach in Cirrhosis of the Liver" before the Interurban Clinical Society.

PEDIATRICS

During the year the schedule of teaching and patient care has continued. A large and increasing number of patients referred to the service for diagnosis and surgical treatment of congenital malformations of the heart has necessitated a close liaison between the Departments of Pediatrics and Surgery, which has been of mutual benefit in teaching and experience. This development, in which Dr. Purdy has been especially concerned, has grown to a point at which the creation of a special inter-departmental unit for the study of cardiac problems has to be seriously considered.

Additional space has been obtained for the Child Psychiatry Unit which has made possible an expansion of its staff and work. Dr. Shirley, Executive Director of the Unit, has completed the manuscript of a textbook in his field, which has been accepted for publication by the Commonwealth Fund.

Research has continued in several fields. Dr. Faber's investigation of the entry and exit of poliomyelitis virus into and out of the body, which dates from 1939 and is supported by the National Foundation for Infantile Paralysis, has made further progress. A study of certain clinical aspects of the disease, based on onset symptoms in 200 cases, is being prepared; the data collected from the City and County Hospital by Dr. Luz, while serving a Fellowship, will be analyzed by Dr. Brainerd and Dr. Faber. Dr. Dickey continues his studies of pulmonary disease, including bronchiectasis and fibrocystic pancreatic disease. Dr. Miller is continuing his laboratory and clinical studies of immunization in infancy and childhood, and at present is particularly interested in determining whether earlier immunization against whooping cough is efficient. Dr. James E. Ziegler, Jr., a Senior Fellow under the National Research Council, has spent a year in the Department studying the interference phenomenon in relation to poliomyelitis and influenza.

We have received a number of important donations during the year which deserve special mention. The Special Gifts Fund, established a few years ago for purposes to be selected by the Executive, has been considerably enlarged by gifts from Mrs. John F. Card, and Mr. Brayton Wilbur. Mr. Wilbur also increased the E.P. Wilbur Free Bed Fund by \$1500.00. Mrs. Richard H. Shainwald contributed \$1000.00 for research under the direction of the Executive. Mr. Walter D. Heller and Mrs. Shainwald contributed \$10,000.00 for

the construction of new nurseries for the newborn in Stanford Hospital, and work on this greatly needed improvement is now under way. Mrs. S.M. Haslett has continued her support of the Joan Howell Free Bed Fund and, on the death of her husband in the spring of 1947, the employees of Mr. Haslett's firm, made an additional contribution to the Fund. Mr. Edward M. Mills has continued his gifts in support of the Dorothy and Gwladys Mills Free Bed Fund. Mrs. Z.Q. Brett, whose son died of poliomyelitis, contributed \$50.00 for support of study of that disease. Mrs. Faber purchased a radio-phonograph for the Children's Wards from Christmas gifts donated by several interested friends of the hospital. Mr. F.B. Abendheim contributed a number of toys, made by himself, for the Children's Ward.

Saturday morning rounds, held in the Children's Ward, have been very well attended by physicians from San Francisco and from out of town as far away as Sacramento, Stockton and Monterey.

Again I wish to express the gratitude of this Department to all the members of the visiting and house staffs, to our nurses and social workers for their loyalty, fine esprit de corps, and splendid performance of their tasks.

Harold K. Faber,
Professor of Pediatrics and
Executive.

PHARMACOLOGY AND THERAPEUTICS

Staff.--The teaching staff remained the same as last year, some temporary new appointments and certain promotions being as follows: Mrs. Jacqueline Landale (A. B., Stanford) research assistant in therapeutics; Dr. Nai Chu (M. B., Kiangsu Medical College) and Dr. Go Lu (M. D., Tung Chi University), teaching and research assistants in pharmacology. Drs. Chu and Lu held fellowships of the American Bureau for Medical Aid to China, Inc. Dr. W. C. Kuzell was promoted to research associate, half-time, and Miss Elizabeth Irwin to research associate, full-time, in therapeutics. The following resigned at different times: Dr. F. P. Luduena, research associate in pharmacology, after 5 years in different capacities, and Mrs. J. Landale, research assistant, and Miss E. Irwin, research associate, in therapeutics. Added new employees were: Mr. P. S. Tabar, laboratory attendant, and Mr. S. A. Gellert (third year student) laboratory assistant during the summer quarter, for research in experimental arthritis; Mrs. Kimiyo Arima, laboratory attendant, virus research; Miss Anne Greco, secretary.

Collaborators with Dr. Cutting were Dr. Geo. B. Robson, clinical instructor in medicine, Dr. R. C. McNaught, assoc. clinical professor of surgery, Dr. A. C. Rawlins, asst. clinical professor of surgery; with Dr. Kuzell, Dr. Phillip Pillsbury, assistant resident in medicine, and Dr. Roland Davison, assistant clinical professor of medicine; with Dr. Hanzlik, Dr. G. L. Laqueur, assistant professor of pathology, Dr. W. M. Meininger, assistant professor of medicine, and Mr. G. L. Ordway, third year student.

Teaching.--Dr. Cutting offered a new elective course in experimental chemotherapy to fourth year students (limited to 4) during the spring quarter. Three students took the course and the work was limited to practice with drugs in various infections in animals. The results were sufficiently encouraging to warrant repeating the course during the autumn, winter and spring quarters 1947 - 48. Other courses were the same as last year. Dr. Cutting completed a revision of his Manual of Clinical Therapeutics.

Research.--Reports published during the current year are listed in the Publications of the Faculty of the President's Report.

Studies of anticonvulsants were extended in several directions. Drs. Hanzlik and Laqueur confirmed their previous results that continued administration of phenobarbital for about 1/3 the span of life injures the liver. The cause of the swelling of hepatic cells remains unexplained, but is not due to excess glycogen, fat or water. These results were prepared for publication. This study of phenobarbital

is being continued in animals on different protein levels and vitamin deficiencies. In view of the well known efficacy, but impracticability, of ketogenic diets in treating epileptic seizures, Drs. Driver and Chu and Mr. Ordway examined over 39 new and old ketogenic and some other compounds for their effects on the cortical threshold for electrical convulsions in different species. Isopropyl alcohol was the most efficient depressant without causing ataxia, comparing favorably with diphenylhydantoin and being superior to phenobarbital and tridione; combining isopropyl alcohol with diphenylhydantoin or phenobarbital gave the highest anticonvulsant efficiency, but not tridione. These results were published in 3 papers. Continued drinking of several ketogens and other agents for about 1/15 the span of life caused an optimal acetone-mia after isopropyl alcohol with decrease in body weight and growth but the vast majority of animals survived and examination of viscera showed no pathological changes. Suggested new compounds containing isopropanol have been undertaken, and the safeness of ketogens is to be further examined.

Dr. Cutting continued his search for antibiotics in indigenous and exotic plants. With Dr. Elliott, Mrs. Jenkins, Mrs. Tripi, Mrs. Landale and Mrs. Cutting he published results with products from a number of plants, indigenous to the Pacific Coast. Except for antibacterial actions of some *in vitro* and reduction of intestinal flora with 1 given orally, none appeared effective against experimental systemic infections with the bacteria used. With Drs. Halpern, Dreisbach and Proescher and Miss Irwin, Mrs. Jenkins and Mrs. Tripi, Dr. Cutting completed a 5-year study of about 250 agents and combinations in virus infections in eggs and mice and submitted the results for publication. Although the majority of these agents failed, minimal protective effects were obtained with certain vitamin excesses and deficiencies. These and other chemotherapeutic leads are being explored further. Dr. Cutting began tests with antiviral agents in spontaneous mammary tumors and in the malignancies of acetaminofluorene. With Drs. McNaught and Rawlins, Dr. Cutting attempted the production of experimental arteriosclerosis in rats by dietary and hypertensive measures.

After trials for about 8 months with pleuropneumonia-like (L_4) microorganisms from different sources, Dr. Kuzell, Mrs. Tripi, Mrs. Landale and Mr. Tabar developed a virulent strain of these organisms which consistently reproduces a progressive polyarthritis in white rats suitable for testing variables affecting arthritic processes, and chemotherapeutic agents. An improved medium for culturing these microorganisms and a new and simple method for staining them were developed. Preliminary tests confirmed the therapeutic

responsiveness of this polyarthritis to a gold product used in clinical rheumatoid arthritis. It is believed that this experimental polyarthritis is the best single lead to a further understanding of the characteristics of, and the chemotherapeutic testing of various agents in, rheumatoid arthritis. These results were published. Tests of various contributory factors and chemotherapeutic agents are in progress. Drs. Kuzell and Pillsbury determined the protective effects of BAL (2, 3 - dimercaptopropanol) against the toxicity of various gold compounds according to the effects on mortality and viscera and urinary excretion of gold. Some protection was demonstrable.

Drs. Luduena and Driver completed limited tests of toxicity of several polyethylene glycols by repeated epidermal application in rabbits and found the toxicity to be greater than hitherto suspected, apparently depending on the dietary used. The results were submitted for publication.

Dr. Dreisbach completed tests of the protective effects of the antihistamines, benadryl and pyribenzamine, in experimental skin sensitization to penicillin and horse serum with negative results as to objective changes. The results were submitted for publication. Presumably the relief from subjective symptoms with these antihistamines in clinical urticarias and the like is dependent on nervous depression, tests for which were begun by Drs. Dreisbach and Chu. Dr. Dreisbach concluded a study of the effects of quinine intravenously in depressed circulatory states and prepared the results for publication.

Dr. Lu undertook a study of an old alkaloid, sparteine, on the characteristics of frog heart muscle; depression was predominant, including arrest or prevention of auricular fibrillation, confirming effects on mammalian hearts.

Mr. G. L. Ordway attempted bioassays with neurospora for certain constituents in human plasma, but with essentially negative results.

Financial support of various researches is gratefully acknowledged to the following: United States Public Health Service, grant-in-aid, chemotherapy of virus infections; Broemmel's Pharmaceuticals, grant, experimental arteriosclerosis; Office of Naval Research, contract, experimental arthritis; Therapeutic Research Committee of the American Medical Association, grant, virucides, and quinine intravenously. Acknowledgement is made of generous supplies of a variety of synthetic compounds and other materials for chemotherapeutic and other researches to Western Regional Research Laboratory, Albany, Calif.; Eastern Regional Research Laboratory, Philadelphia, Pa.; Winthrop Chemical Co., Rensselaer, N. Y.; Abbott Laboratories, North Chicago, Ill.; Frederick Stearns & Co., Detroit, Mich.; Merck

and Co., Rahway, N. J.; Lederle Laboratories, Pearl River, N. Y.; Shell Development Company, Emeryville, Calif.; Dr. H. A. Spoehr, Carnegie Institution for Plant Biology, Stanford University; Dr. Hubert Loring, Stanford Department of Chemistry; Schwarz Laboratories, New York, N. Y.; Cutter Laboratories, Berkeley, Calif.; Parke Davis & Co., Detroit, Mich.; Ciba Pharmaceutical Products, Inc., Summit, N. J.; Dr. K. F. Meyer, Hooper Foundation for Medical Research, University of California, San Francisco, Calif.

Miscellaneous.--Dr. Hanzlik attended meetings of the Federation of American Societies for Experimental Biology and presented a paper on carbitol and glycols before the pharmacological, attended, by invitation, the annual meeting of the Council of Foods and Nutrition, A. M. A., both in Chicago, helped organize the Northern California Rheumatism Association in San Francisco, and assisted local, state and federal authorities with medicinal and toxic agents. Dr. Cutting discussed new drugs and their uses before the San Jose Hospital Medical Staff, San Jose, penicillin and chemotherapy at the annual meeting of the California State Dental Association in Oakland, new drugs before the Northern California Pediatric Society, San Francisco and antiviral processes before the Permanente Foundation Hospital Staff, Oakland. Dr. Cutting attended a meeting of the Therapeutic Trials Committee, A. M. A. of which he is a member, and was appointed permanent editor of the Stanford Medical Bulletin. Dr. Kuzell discussed arthritis at the U. S. Naval Hospital, Treasure Island, Permanente Foundation Hospital, Oakland, and Sacramento County Medical Society, Sacramento, and was appointed assistant editor of the Stanford Medical Bulletin. Members of the department presented reports at, or attended regular meetings of, the Pacific Coast Section of the Society for Experimental Biology and Medicine.

P. J. HANZLIK
Professor of Pharmacology

PHYSIOLOGY

The active staff of the Department of Physiology consisted of Frank Walter Weymouth, James Percy Baumberger, John Field II, and Victor Ernest Hall, professors; Jefferson Martineau Crismon, associate professor; Frederick A. Fuhrman and Margaret Lindsay Turner, instructors; Sydney Frissel Thomas, lecturer; Ronald Grant, Monroe Jerome Hirsch, Jack J. Lewis, research associates; Terrine Adler, Kathleen Bardwell, Ruth Lenore Dryer, Forrest Albert Ellis (Summer Quarter), Geraldine J. Fuhrman (Spring Quarter), Mathilda Goldsmith, Milton H. Horowitz, Basil Panzer, Clarence Norman Peiss (Summer Quarter), Eminger Stewart, and Edward L. Walker, research assistants; and Geraldine J. Fuhrman (Winter Quarter), teaching assistant.

The end of the accelerated war program for the Medical School did not bring as much relief in the teaching load for the Department as had been anticipated. The additional post-war university enrollment increased by about a quarter the enrollment in medical physiology, and greatly increased the number taking the elementary course. There was a call for the course in the physiology of exercise for the first time in several years and it was given by Instructor Frederick Fuhrman. The course for physical therapy technicians was given twice during the year (Professor Hall and others), and also a course for graduate students in psychology. This increased enrollment, of which about half is veterans, seems likely to continue. A pleasing feature of the situation is that the students taking work in the Department have been unusually well motivated and competent.

Meetings. The meetings of the Federation of American Societies for Experimental Biology held May 18-22 in Chicago were attended by the following members of the staff: Victor E. Hall, Monroe J. Hirsch, Ronald Grant, Frederick A. Fuhrman, John Field II, and J. P. Baumberger. The last four of these presented papers in person or by title. Professors Hall, Field and Grant and Dr. Hirsch, all engaged on Air Materiel Command projects, attended a conference at Wright Field and saw demonstrations arranged for the convenience of workers attending the Chicago meetings.

Editorial Activities. During the year Volume IX of the Annual Review of Physiology was published for the first time under the editorship of Professor Hall with Professor Crismon as associate editor. Professor Hall attended a meeting of the Editorial Board of the Annual Reviews held in connection with the Chicago meetings. Professor Baumberger served as associate editor of the Physiological Reviews and in that capacity attended an editorial meeting in Chicago.

Research. During the academic year Instructor Margaret Lindsay Turner continued studies on the factors regulating body temperature in exposure to heat and cold. Comparison of the responses of body temperature to environmental temperature change in thin, yellow mice and genetically similar obese mice

was made. The responses of these two groups of animals at nearly all environmental temperatures tested were significantly different. The obese mice, at room temperature, have a lower body temperature and are unable to maintain it over as wide a range of environmental temperatures as do the thin mice. These experiments are to be published shortly. Investigation of the *in vitro* effects of commercial thyroid preparations was continued. In the concentrations used, none of the preparations had any significant effect on the oxygen uptake of brain, liver, or muscle tissue of the guinea pig.

With Dr. Frederick A. Fuhrman, Professor Crismon continued joint studies on the effects of interference with blood supply to peripheral tissues, part of a three-year program supported by the John and Mary R. Markle Foundation and the Stanford Medical Research Fund. Measurements of water, sodium and potassium in the leg muscles of rats and rabbits have shown that the application of tourniquets for periods of one to four hours is followed by a marked accumulation of sodium and water and a loss of potassium during a two-hour period of reestablished blood flow. When the period of occlusion is less than three hours, the accumulated sodium and water exist in the extracellular phase as an edema, but after longer periods of occlusion, the gain of sodium becomes greater than the gain of water. This increase of the "sodium space" is an indication of cellular penetration by sodium in large amounts and is an expression of cell injury similar to that encountered in burns, frostbite and crushing of tissues. Examination of muscle tissue from the legs of rats at various times following the removal of tourniquets left on for two hours shows that the edema persists for several days but that no gangrene develops. Similar examinations, following the use of four-hour tourniquets, show that gangrene develops in some of the animals. Data is being collected to determine whether or not the cell penetration by sodium, which is observed after four-hour occlusion, is a reversible process. It is not likely that the loss of potassium, which is also a finding in these tourniqueted legs, represents only a replacement in the cells of potassium by entering sodium.

Additional experiments with the drug, rutin, have substantiated preliminary experiments reported last year. Rutin is an effective agent in the prevention of gangrene following severe cold-injury. The amounts of tissue saved in the frost-bitten feet of rabbits treated with rutin were approximately equal to the amounts saved in our best results with rapid warming, casts and pressure dressings. Areas of abdominal skin of rats were frozen by the application of solid carbon dioxide. Subsequent injection of trypan blue dye intravenously produces intense blue staining of the skin in the area injured by cold. In rutin-treated animals, the time from dye injection to the first detectable staining of the injured skin, was approximately double that in the untreated animals. Either protection of the capillaries against an increased permeability induced by cold or altered distribution of local blood flow could account for the difference in the time of appearance of

dye. Adequate evidence is lacking at the present time on the mechanism of action of rutin.

In connection with the work on rutin, Professor Crismon has been asked to present the results of his studies on the physiological effects of rutin at a joint conference with representatives of the War Department and the Agricultural Research Administration of the U. S. Department of Agriculture. This conference will be held in Washington, D. C., during September.

Two "bubble" flow meters for the measurement of peripheral blood flow have been constructed and used successfully for preliminary measurements of blood flow in the hind legs of rabbits.

Some additional experiments upon the effects of intra-arterial injection of micro-spheres have been carried out. None of the animals sustained impairment of blood flow to the periphery sufficient to produce gangrene, although some of them showed signs of temporary loss of sensation and voluntary movement of the foot when micro-spheres were injected into the femoral artery.

The chief application of this new method of studying selective obstruction of arterial vessels of various sizes was made by Dr. Jack J. Lewis, Life Insurance Medical Research Foundation Fellow for the current year. Dr. Lewis has been studying the relationship between renal blood supply and renal function. Complete interruption of blood flow to the kidneys of rabbits by clamping of the renal pedicle for twenty minutes leads to persistent decrease of glomerular filtration rate in the period following restoration of blood supply. Kidneys subjected to this duration of ischemia show histological signs of damage to tubule cells and areas of necrosis owing to persistent occlusion of blood vessels or to localized hemorrhages. When micro-spheres, with a mean diameter of 35 microns, are introduced into the renal arterial circulation there is a reduction in the rate of urine formation, but as much as 250 to 350 mg. of glass spheres are required to stop completely the formation of urine.

During the year three papers on the cardiovascular effects of sodium salts of the lower fatty acids were published by Professor Hall with the coauthorship of Dr. Henry Elliott, Miss Helen Kipple and Mr. Milton Waldman. These papers contain part of the results of a study of toxicity of stabilizers of concentrated human albumin solutions.

In collaboration with the Division of Physical Therapy, a study of the physiological effects of hot fomentation was completed and published with the coauthorship of Miss Elba Munoz and Miss Barbara Fitch, and with the further assistance of Mrs. Marta Vé Fox. The results show that hot packs, by stimulation of cutaneous receptors, diminish the strength of contraction of underlying muscles, probably by causing vasoconstriction in them. If this should occur also in human beings, it would raise a serious question as to the propriety of treating clinical disorders involving spasm, such as the acute stage of poliomyelitis, by means of hot fomentation.

Last summer the University entered into a contract with the Air Materiel Command to study certain aspects of temperature

regulation, to be directed by Professor Hall in association with Professor Field. The project is aimed at determining whether the metabolic activity of the brain is a factor in setting the level at which body temperature is regulated. For the study of the temperature behavior of the intact animal, Professor Hall obtained the services of Dr. Ronald Grant, Assistant Professor of Physiology at McGill University (on leave of absence). Dr. Grant was assisted by Mr. Basil Panzer during the year, and by Mr. Albert Ellis during the Summer Quarter. For the study of brain metabolism, which is directed by Professor Field, the assistance of Mrs. Mathilda Goldsmith and Mr. Clarence Peiss has been obtained.

The first problem attacked has been the experimental fever produced by injection of typhoid-paratyphoid vaccine. We have shown that, at normal or high environmental temperatures, the rise in body temperature is evoked at least in part by restriction of heat loss. At temperatures high enough to produce panting, the vaccine raises markedly the body temperature level required to evoke panting.

It is currently believed that this vaccine, like other agents causing fever, "resets" the body thermostat to work at a new high level. We have, however, shown that at low environmental temperatures (around 5° C.), vaccine administration causes, not the rise in body temperature called for by accepted theory, but a fall. This appears to be due at least in part to a decrease in the effectiveness of the chemical defense against overcooling. This finding will require either abandoning or making significant revisions of current views as to the nature of fever.

The question as to whether the putative alteration in thermostatic "set" in the febrile state is accompanied by a characteristic alteration in brain metabolism has been studied on cerebral cortex tissue by Professor Field. Two series of experiments were run. In the first the oxygen consumption of rabbit cerebral cortex slices was determined at graded temperatures ranging from 39° C. (normal for the rabbit) to 45°. In the second series similar measurements were made on cerebral cortex slices from febrile rabbits of the same body size. No significant difference in respect of oxygen consumption by cerebral cortex slices was found between the animals comprising these two series. The influence of supranormal temperatures was the same in both. Thus it appears that fever does not involve quantitative alterations in brain respiration other than that attributable to hyperthermia *per se*.

It was shown previously that succinate oxidation in brain is not impaired under various circumstances that depress the utilization of other fuel stuffs. This has led to the suggestions that succinate might prove of value in the treatment of shock, anesthetic overdosage, and other conditions in which brain metabolism may be lowered. However, Professor Field and Mr. J. T. Fishgold have found that while succinate is readily oxidized by brain tissue, such oxidation fails to maintain the capacity of the tissue to utilize the normal fuel stuff, glucose.

Furthermore, succinate oxidation does not maintain the level of high energy phosphate bonds as well as glucose oxidation. It was concluded that in spite of the high rate of oxygen consumption of brain tissue in the presence of succinate, such oxidation failed to supply sufficient energy for cell maintenance.

It has been shown in earlier work in this laboratory that low concentrations of the nitrated phenols augment the oxygen consumption of rat cerebral cortex *in vitro*, while higher concentrations of the drug have an inhibitory effect. Professor Field and Mr. Peiss have undertaken an investigation of the mechanism of these effects on an enzyme level. It has been found that dinitrophenol augments the oxidation of pyruvate but not of succinate, hence the locus of the augmentation must be above succinate utilization in the chain of reactions comprising carbohydrate utilization and must include pyruvate. It also has been found that the inhibition of succinate utilization by dinitrophenol is of the non-competitive type. Further studies are in progress along these lines.

Professor Baumberger continued the program of research on respiratory pigments and cell metabolism with the able assistance of Mrs. Kathleen Bardwell, Research Assistant.

He guided the work of the students in the following projects.

Mr. George F. Leong obtained a Master's Degree for work embodied in a thesis "Relation of oxygen tension and combined oxygen to the respiration of cells."

Mr. Fred Williams devised a method of following rapid changes in oxygen content of gas mixtures by means of the platinum electrode.

Mr. Wallace Chan developed an aseptic colony of Lepisma for nutritional studies.

Miss Naomi Fried, Brush Foundation Fellow, made a study of the factors controlling the activity of hyaluronidase and antinvasin in fertilization.

Mr. Frank Fales followed the course of carbohydrate synthesis in yeast during fermentation.

In addition to routine administrative work and consultation on statistical aspects of research in the Department, Professor Weymouth engaged in the following research. Under a contract with the University and the Air Materiel Command, studies on depth perception and visual acuity were carried out in collaboration with Monroe J. Hirsch, Edward L. Walker and Milton W. Horowitz, all of whom received their doctorates during the year. The problems dealt with the superiority of binocular over monocular visual acuity, a comparison of vernier acuity and distance discrimination under similar conditions, and the effect of separation of the targets on distance discrimination. An examination was made of certain aspects of the horopter, and a study of apparatus and methods adapted for rapid testing of aviation personnel.

He also acted as one of the advisors of a group of Indian graduate students, Harbans Lall Arora, Vishwa G. Jhingran, Ramavarma R. Prasad, and Ved Vrat, specializing in Fisheries Biology.

FRANK WALTER WEYMOUTH Executive Head

PUBLIC HEALTH AND PREVENTIVE MEDICINE

The one change in the staff was the resignation of Dr. Emmett E. Sappington from his position as Assistant Clinical Professor. Dr. Sappington has retired from his post in the San Francisco Department of Public Health where, as Dr. Geiger's assistant, he had served very effectively in developing our field work since its inception in 1940.

The organization of medical student instruction continues in the manner previously described. We have enjoyed the splendid collaboration of Dr. Geiger's San Francisco Department of Public Health in providing practical experience. Other public organizations which have participated in this teaching have been the California State Department of Public Health, the East Bay Municipal Utility District, the San Francisco Board of Public Works and the Board of Park Commissioners. Private industries to which the Department is also indebted for participation in our public health instruction are the Cutter Laboratories, Metropolitan Life Insurance Company, Pan American World Airways, Pacific Telephone and Telegraph Company, Borden's Dairy Delivery Company, Swift and Company, American Can Company, Bethlehem Steel Company and W. P. Fuller Company.

The Medical Social Service and this Department continued presentation of the course "The Patient in His Environment". Contributing to the class discussions were the following: Mr. J. M. Dodd of the Bureau of Vocation Rehabilitation of the California Department of Education, Mr. David Houston of the National Committee for Education on Alcoholism, Miss Katherine Sutter and Miss Alice Henry of the San Francisco Unified School District, Dr. R. S. French of the California School for the Blind, Miss Nellie Woodward of the Family and Children's Agency, Miss Miriam Martius and Dr. William Wagner of the San Francisco Department of Public Health, Mrs. Miriam Darwin of the Florence Crittenton Home, Miss Ruth Burcham of the San Francisco Visiting Nurse Association, Mr. Peter Sandi of the International Institute, Mrs. Beryl Reinhardt of the San Francisco Department of Public Welfare, Mr. Walter Creighton of the California Division of Narcotic Enforcement, and Miss Jeanette Harris of the California State Department of Social Welfare.

This Department joined with the University of California School of Public Health in sponsoring and arranging a series of round table discussions on industrial health. The Stanford Graduate School of Business collaborated in developing the meetings. Participants also included industrial physicians and nurses, business and labor union executives, and members of official and voluntary health and welfare agencies. Topics discussed ranged from social service case work to nuclear physics and from clinical medicine to law. Plans are under way for extending the round table discussions next year.

Coccidioid research has continued as an activity of the Commission on Acute Respiratory Diseases of the Army Epidemiological Board. The demands for coccidioidin, for serological studies and for consultative advice increase. While onerous, they provide valuable contacts for studying the pathogenesis of the infection. Concomitant studies are being carried out in the laboratory.

Dr. Jacob C. Geiger's affiliations previously described have been continued. During the year he has received six outstanding

decorations with appropriate citations. These awards comprise: the Royal Order of Vasa, First Class, from Sweden; the Officer's Cross of the Royal Order of Leopold the Second from Belgium; the Grand Ducal Order of the Oak Crown of the House of Nassau of the Grand Duchy of Luxembourg, Grade of Officer, First Class; Meritorious Medal of the Canadian Legion of the British Empire Service League; Royal Order of the Crown of Orange Nassau, Officer Grade, from the Netherlands; Gold Cross of the Royal Order of Phoenix from Greece. He was awarded a gold police star by the Police Commission and received a Certificate of Merit and the first award from the Public Relations Club of San Francisco.

He presented the subject of public health in the Discussion of Municipal Affairs at Columbia University and participated in the Seminar on B.C.G. at the annual meeting of the National Tuberculosis Association. He discussed the paper "Should Public Water Supplies be Used for Mass Medication" at the annual American Water Works Convention. He addressed the California Dietetic Association on "Food Poisoning". In addition he addressed many local and regional groups including the Rotary Clubs of San Jose and Richmond, Kiwanis, Alcoholics Anonymous, Pacific Association of Railway Physicians, Alameda Community Council and a number of fraternal groups. He spoke at Stanford University on "Tropical Zone and Public Health". Dr. Geiger also participated in a number of radio broadcasts on public health and social problems.

Dr. W. P. Shepard served as President of the National Tuberculosis Association. He presided at its numerous Executive Committee meetings and at its 43rd Annual Meeting where he delivered the Presidential Address. He served on its various budget and program committees and its reorganization committee. He continued to serve as Chairman of the American Public Health Association Committee on Professional Education and attended its many meetings in New York. This Committee is now working with the American Medical Association in developing American (Specialty) Board Certification in Public Health. He continues to serve on the Governing Council of the American Public Health Association, on the Regional Board and Executive Committee of the Western Branch American Public Health Association, on the Advisory Board of Health Services of the Division of Health Education, American Red Cross, on the Committee of Training of Public Health Personnel, United States Public Health Service, on the Research Advisory Committee of the California Tuberculosis and Health Association and various other Boards and Committees mentioned in previous reports. He was reappointed Consultant to the California State Board of Health and to the State and Provincial Health Authorities. He was reelected First Vice President of the California Social Hygiene Association, Member of the Board of Directors of the California Heart Association and of the Western Association of Industrial Physicians and surgeons of which he is also President. He was appointed Special Consultant to the Surgeon General as a member of the Public Health Methods Section, Research Grants Division, National Institute of Health. He was appointed to the National Advisory Committee of the Cleveland Museum. He is on the Editorial Boards of the American Review of Tuberculosis and of California Medicine. He participated in many national, state and local meetings. These included the Annual Meeting of the American Public Health Association in Cleveland where he presided at the

Merit System Unit Session and was a member of the panel on "Landmarks of 1946" and gave an address on "Today's Key to Better Public Health Service". He gave three papers at the annual meeting of the Washington Tuberculosis Association and another at the Washington State Social Hygiene Association in Seattle. He took part in a nurses' institute at Salt Lake City, in an institute for tuberculosis workers and in another for rehabilitation of the tuberculous at San Francisco. He addressed the Northern California Public Health Association and attended the annual meeting of the American Medical Association in Atlantic City.

Dr. Rodney B. Beard continued as Medical Officer of the Pacific-Alaska Division of Pan American World Airways. This association broadens the Departmental contacts in industrial preventive medicine and aviation medicine. During the year he made an inspection trip of the entire Pacific-Asiatic area, visiting eleven major cities as far distant as Calcutta. The trip provided an insight into the communicable disease problems of our Pacific basin and established cordial relations with public health personnel. The information gathered on the journey was the basis for several talks to professional and lay groups, including one of the Lane Popular Medical Lectures. Dr. Beard served on the Program Committee of the Western Branch of the American Public Health, where he discussed a paper on "Modern Problems of International Quarantine". He attended the Annual Meeting of the National Tuberculosis Association and presented a paper entitled "What Industry Expects from Chest X-ray Surveys". As Secretary of the Western Association of Industrial Physicians and Surgeons, he arranged the program for its annual meeting and read a paper on "Immunization against Tetanus". He is now a Director of the Association. He continues to serve as Chairman of the Committee on Industrial Health of the San Francisco County Medical Society and has been reelected Chairman of the Health Council of the San Francisco Community Chest. He has been elected President of the Pasteur Society of Central California.

Dr. Charles E. Smith has been appointed Expert Consultant to the Secretary of War and Special Consultant to the Surgeon General for the Bacteriology Study Section of the Research Grants Division, United States Public Health Service. He was reelected President of the California State Board of Public Health and reappointed to the Advisory Board on Health Services of the American Red Cross. He is a member of the Epidemiology Section Council of the American Public Health Association, member of the Regional Board of the Western Branch of the American Public Health Association and President of the Northern California Public Health Association, member of the Research Advisory Committee of the California Tuberculosis and Health Association, member of the editorial board of *California Medicine*. He is President of the Board of Directors of the Family and Children's Agency. He continues as Chairman of the Public Health Committee of Stanford University.

He attended the annual meetings of the Society of American Bacteriologists and California Medical Association. He presented a paper at the Conference on Preventive Medicine and Health Economics, School of Public Health, University of Michigan, entitled "The Training of Personnel to Teach Health Economics in Medical Schools. The Utilization of a Syllabus and Current Literature". He addressed the annual meetings of the American Student Health Association on

"How to Get Medical and Hospital Care", the Western Branch of the American Public Health Association on "Undergraduate Training in Medical Schools for Public Health" and the National Tuberculosis Association on "The Use of the Coccidioidin Test". He presented the subject of coccidioidomycosis to various local medical and hospital groups.

CHARLES E. SMITH
Professor of Public Health
and Preventive Medicine

SURGERY

The department records with real regret the retirement of Clinical Professor Hans Barkan, who has been in charge of the division of Ophthalmology since 1928. Except for a brief period spent in the armed forces during the First World War, Dr. Barkan has been a valued member of that division continuously for 33 years. His ever willing counsel based on a very wide experience will be greatly missed by his associates, both in the school and in the division. During the past year, under Dr. Barkan's direction, the only eye bank in western United States was established. Approximately a thousand individuals have already willed their eyes to the bank, and a satisfactory method of shipping eyes to distant points for corneal transplant has been evolved. The eye service at the San Francisco Hospital has been greatly improved by the appointment of a fulltime resident of its own.

Dr. A. Edward Maumenee, now Associate Professor of Ophthalmology at Johns Hopkins Medical School, has been appointed Professor to take charge of the division of Ophthalmology in the fall of 1948. In the meantime, Dr. Dohrmann Pischel will act as executive of that division during the year 1947-48.

In the division of Otolaryngology, the demand for postwar training has been partially met by the establishment, in conjunction with the University of California, of an evening instruction course for residents of hospitals in the Bay Area. Intended primarily for the resident staff of the Veterans Administration Hospital at Fort Miley, it has attracted a number of practicing laryngologists of the Bay Region and of the Peninsula.

In the division of Bone and Joint Surgery, an exchange of residents has been effected with the University of Michigan, whereby the resident in Bone and Joint Surgery at the San Francisco Hospital will spend a year at the University of Michigan Hospital, and one of the residents from that hospital will spend a year on the Bone and Joint Service at the San Francisco Hospital.

Under Dr. Matnewson's direction, the Stanford Surgical Service at the San Francisco Hospital has been divided into a number of services to include Men's Surgery, Women's Surgery, Children's Surgery, Neurological Surgery, including the treatment of Fractures. In addition to the internes on the regular rotating service, one resident, one assistant resident and six house officers are assigned to Surgery. Two of the house officers rotate during an alternate six months' period through the Pathology department. During the past year, four house officers have rotated for a three months' period through the Surgical Service at the Palo Alto Hospital. In addition to regular ward rounds, the entire surgical staff attends the regular weekly Clinical Pathological Conference, Journal Club, X-ray Conference, and Tumor Clinic.

Again we must stress the great need at Lane Hospital for clinic beds for the training of the younger house staff and for the teaching of students. It is indeed regrettable that the new Pediatric Surgical Unit of eight beds could not be opened because of lack of funds. Surely somewhere should be available the \$10,000 needed yearly to staff and run this unit.

The following addresses were delivered by members of the department during the past year:

Dr. R. L. Ashley: "Review Course in Otolaryngology," before the University of Kansas Medical School, Kansas City; "Head Hunters," before the New York Otological Society, New York.

Dr. Otto Barkan: "Cyclodialysis,- Its Mode of Action," before the Pacific Coast Oto-Ophthalmological Society.

Dr. J. W. Bettman: "Some Clinical Considerations in Strabismus," before the Pacific Coast Oto-Ophthalmological Society; "Transient Opacities of the Lens," before the San Francisco County Medical Society.

Dr. W. E. Borley: "The Scleral Resection Operation for Retinal Detachment," before the California Medical Association.

Dr. J. W. Cline: "Public Relations of the California Medical Association," before the San Francisco County Medical Society.

Dr. Roy Cohn: "The Treatment of Traumatic Injuries of the Abdomen Exclusive of Penetrating Wounds," before the Santa Cruz County Medical Society; "Experimental Surgery of the Interauricular Septum," before the American Heart Society; "Limitations of the Treatment of Empyema with Penicillin," before the San Francisco County Medical Society.

Dr. L. G. Dobson: "The Treatment of Actinomyces," before the Pacific Coast Society of Oral Surgeons; "Aneurysm of the Splenic Artery," before the San Francisco Surgical Society; "The Surgical Treatment of Cancer,"-Lane Popular Medical Lecture.

Dr. Leo Eloesser: "China Through a Doctor's Eyes," before the Institute of Pacific Relations and San Francisco Center of California League of Women Voters.

Dr. Max Fine: "New Eyes for Old (Corneal Transplants),"-Lane Popular Medical Lecture; "Treatment of Keratoconus by Corneal Transplantation," before the Pacific Coast Oto-Ophthalmological Society; "The Operation of the Stanford Eye Bank," before the San Francisco County Medical Society.

Dr. Frank Gerbode: "The Treatment of Wounds of the Abdomen and Rectum in an Evacuation Hospital," before the San Francisco County Medical Society; "The Treatment of Peptic Ulcer by Vagotomy," before the Treasure Island Naval Hospital Staff; "Congenital Arteriovenous Fistulas of the Face and Neck," and "Recent Advances in Surgery," before the Lane Medical Society; "Congenital Arteriovenous

Fistula Between the Internal Maxillary Artery and Pterygoid Plexus," before the Society of University Surgeons, Boston; "The Role of Anticoagulants in the Prevention and Treatment of Thrombo-embolic States," before the Sectional Meeting of the American College of Surgeons, San Francisco; "Experimental Cardiac Hypertrophy," before the Society for Vascular Surgery, Atlantic City.

Dr. P. K. Gilman: "The Relationship of the Health Officer and Practicing Physician to the Planning of Hospital and Health Center Facilities in California," before the California Medical Association.

Dr. Emile Holman: "Surgical Aspects of Congenital Heart Disease," before the San Francisco County Medical Society, the Hollywood Academy of Medicine, the Medical Staff of the San Jose Hospital, the Sequoia Medical Society, Redwood City, and the Postgraduate Symposium on Heart Disease of the San Francisco Heart Committee; "Thoracic Surgery: The Diagnosis and Treatment of Carcinoma of the Lung," before the General Meeting of the Postgraduate Medical Course, Stanford University School of Medicine; "The Treatment of Arteriovenous Fistulae," before the Treasure Island Naval Hospital Staff; "Surgical Lesions of the Stomach," before the San Mateo County Medical Society; "Cancer of the Stomach," and "Cancer of the Lip," before the Postgraduate Course on Neoplastic Diseases of the Cancer Commission, California Medical Association; "The Diagnosis and Treatment of Benign and Malignant Tumors of the Chest," "The Diagnosis and Treatment of Injuries to the Heart and Large Vessels," and "The Diagnosis and Surgical Treatment of Malformations of the Heart and Great Vessels," before the Spokane Surgical Society, Spokane.

Dr. N. J. Howard: "Carcinoma of the Rectum: Historical Attempts to Solve the Problem," before the San Francisco County Medical Society; "An Evaluation of the Conservative Treatment of Semilunar Cartilage Injuries. A Ten Year Study and Follow-up," before the American Association for Surgery of Trauma, Atlantic City; "Cancer of the Ear (Pinna)," before the Postgraduate Course on Neoplastic Diseases of the Cancer Commission, California Medical Association.

Dr. J. M. Kenney: "Cancer of Head and Neck," before the Marin County Medical Society; "Nursing Aspects of Cancer," before the California State Health Department Institute for Public Health Nurses, Fresno.

Dr. D. E. King: "The Treatment of Certain Types of Compound Fractures," before the Stanislaus County Medical Society; "Common Errors in Treating Fractures," before the San Joaquin County Medical Society and the Fresno County Medical Society; "Arthritis," before the General Meeting of the Postgraduate Medical Course, Stanford University School of Medicine; "Acquired Deformities of Children," before the Northern California Pediatric Society; "Internal Fixation for Lumbar Spinal Fusion

Operations," before the American Orthopedic Association, Hot Springs, Virginia.

Dr. Russell Klein: "Carcinoma of the Large Bowel," before the Solano County Medical Society; "Diagnosis of Carcinoma of the Rectum," before the San Francisco County Medical Society; "Multiple Polyposis of the Colon," before the Northern California Proctological Association.

Dr. G. S. Lachman: "Corneo-Scleral-Conjunctival Suture in Cataract Operation," before the San Francisco County Medical Society; "Argyll Robertson Pupil as a Sole Clinical Finding in Central Nervous System Disease," before the California Medical Association.

Dr. Frank Lusignan: "Repair of Cranial Defects," before the San Francisco County Medical Society.

Dr. Carleton Mathewson, Jr.: "Vagotomy in the Treatment of Peptic Ulcer," and "The Treatment of Carcinoma of the Rectum," before the San Francisco County Medical Society; "The Surgical Management of Bleeding Peptic Ulcer," before the California Medical Association; "Primary End-to-End Anastomosis following Resection of the Rectum and Recto-sigmoid," before the Pacific Coast Surgical Association; "The Surgical Management of Extensive Avulsions of Skin," before the American Association for the Surgery of Trauma, Atlantic City.

Dr. Sanford Moose: "Oral Surgical Procedures," before the San Francisco District Dental Society, the Sacramento District Dental Society, the Pacific Coast Society of Orthodontists, the College of Physicians and Surgeons Alumni Association, and the California Society of Oral Surgeons.

Dr. G. W. Nagel: "Surgical Lesions of the Esophagus," before the Sectional Meeting of the American College of Surgeons, San Francisco; "Recent Advances in Surgery for Cancer of the Esophagus," before the Postgraduate Course on Neoplastic Diseases of the Cancer Commission, California Medical Association.

Dr. W. B. Neff: "Curare in Anesthesiology," before the Sectional Meeting of the American College of Surgeons, San Francisco; "Continuous Caudal Anesthesia in Obstetrics," before the Nuffield Departments of Obstetrics and Anesthetics, Oxford University, Oxford, England; "The Use of Nitrous Oxide, Demerol, and Curare in Anesthesia," before the Nuffield Department of Anesthetics, Oxford University, Oxford, England.

Dr. G. B. O'Connor: "Phagedenic Ulcer of the Penis,-Plastic Repair," before the American Association of Plastic Surgeons, Nashville, Tennessee.

Dr. James Ownby, Jr.: "The Retention of Pyelographic Media by Blood Clots in the Renal Pelvis," before the San Francisco County Medical Society.

Dr. D. K. Pischel: "Retinal Detachment: Its Diagnosis and Treatment," before the Mid Winter Clinical Convention, Los Angeles; "Operative Treatment of Retinal Detachment," before the University of Michigan Medical

School and the American Academy of Ophthalmology and Otorhinolaryngology, Chicago.

Dr. A. G. Rawlins: "Allergic Sinusitis," before the Hewlett Club, San Francisco, and the American Academy of Ophthalmology and Otolaryngology; "Nasal Allergy," before the San Francisco County Medical Society.

Dr. F. L. Reichert: "The Role of Sympathectomy in the Treatment of Peripheral Vascular Disease, Headache, and Hypertension," before the Treasure Island Naval Hospital Staff; "Neuralgias of the Head and Face," before the Stanislaus County Medical Society.

Dr. L. R. Reynolds: "Round Table Discussion: The Treatment of Carcinoma of the Prostate. Results following Orchiectomy and the Administration of Estrogenic Hormones," before the San Francisco County Medical Society.

Dr. Victor Richards: "Congenital Lesions of the Neck," before the Southern Oregon Medical Society and the Sectional Meeting of the American College of Surgeons, San Francisco; "Thoracic Surgery," before the General Meeting of the Postgraduate Medical Course, Stanford University School of Medicine; "Surgical Lesions of the Thorax," before the Monterey County Medical Society.

Dr. W. L. Rogers: "Pulmonary Neoplasms," before the Pacific Coast Railroad Association; "Thoracic Surgery," before the General Meeting of the Postgraduate Medical Course, Stanford University School of Medicine; "Cystic Disease of the Lung," before the Pacific Coast Surgical Association.

Dr. Paul Samson: "The Treatment of Empyema," before the San Francisco County Medical Society; "The Care of Thoracic Injuries," before the Arizona Chapter of the American College of Chest Physicians; "Extrapleural Pneumothorax. Presentation of Cases," before the Sectional Meeting of the American College of Surgeons, San Francisco.

Dr. Robert Scarborough: "Carcinoma of the Colon," before the Sectional Meeting of the American College of Surgeons, San Francisco; "Carcinoma of the Rectum. Factors Influencing Choice of Operation," before the San Francisco County Medical Society; "Proctology for the General Practitioner," before the California Medical Association; "Malignant Disease of the Colon and Rectum," before the Fresno County Medical Society; "Cancer of the Large Intestine," before the Postgraduate Course on Neoplastic Diseases of the Cancer Commission, California Medical Association.

Dr. T. L. Schulte: "Genito-Urinary Problems," before the Santa Clara County Medical Society.

Dr. Frederic Shidler: "Pre-and Post-Operative Care," before the San Joaquin County Medical Society; "Post-Operative Care Panel Discussion: Protein Therapy," before the Sectional Meeting of the American College of Surgeons, San Francisco; "Review of the Sectional Meeting of the American College of Surgeons," before the Butte

and Glenn Counties Medical Societies; "Carcinoma of the Colon and Rectum," before the Santa Barbara County Medical Society.

Dr. M. L. Skaggs: "Pitfalls and Safeguards in Spinal Anesthesia," before the Marin County Medical Society.

Dr. E. G. Sloman: "Anatomy with Special Reference to Problems in Oral Surgery," before the Northern California Society of Oral Surgeons; "The Veterans Administration Program," before the Medico-Dental Study Club, San Francisco; "Mandibular Anesthesia," before the Phoenix, Arizona, Dental Society; "Social Trends in Professional Relations," before the American Association of Dental Schools, Chicago.

Dr. W. A. Sumner: "Round Table Discussion: The Treatment of Carcinoma of the Prostate. Results following Orchiectomy and the Administration of Estrogenic Hormones," before the San Francisco County Medical Society.

Dr. Walter Work: "Present-Day Conception of Hearing Aids," before the San Francisco County Medical Society.

Emile Holman
Professor of Surgery

SCHOOL OF NURSING

This year the fifty-first class was graduated from the School of Nursing. Thirty-five received their Baccalaureate degrees in June, four graduating "With Distinction".

Enrollment is steadily decreasing, and probably will continue to do so for the next two years inasmuch as smaller classes have been admitted since the end of World War II. For the first time in many years, a spring class was not admitted this year due to lack of applicants. The outlook for larger classes looks encouraging, however, for we continue to receive an increasing number of inquiries concerning the program offered. A total of 24 new students was admitted to the School during the academic year 1946-47. Resignations from the School totalled 7, however one student was re-admitted.

The total student census as of

August 31, 1941	was	97
August 31, 1942	was	119
August 31, 1943	was	127
August 31, 1944	was	157
August 31, 1945	was	153
August 31, 1946	was	136
August 31, 1947	was	106

Students for 12 weeks affiliation in Pediatric Nursing, 8 weeks in Psychiatric Nursing, and 4 weeks in Private Patient Nursing were accepted. Commencing July 20th, the Psychiatric Nursing affiliation was lengthened to 12 weeks. The total number of affiliating students accepted this year was 77.

The School of Nursing continued its participation in the U. S. Cadet Nurse Corps. At the present time 76 students are members of the Corps. The Senior Cadet period, which is the last six months of the thirty-six months' course, has proven valuable both from the standpoint of the students, the School, and the Hospital. The assignment of the 32 Stanford Senior Cadets during the academic year has been as follows:

- 1 to the Veterans Administration
- 2 to the Oakland Visiting Nurse Assn.
- 2 to the San Francisco Visiting Nurse Assn.
- 27 remained at Stanford.

Those at Stanford have served in the capacity of assistants to Head Nurses, thereby largely replacing graduate nurses. Many have carried the evening and night duty shifts, and some units have been almost completely staffed by students. Throughout the year 15 Senior Cadets from other schools spent their last six months with us.

We have endeavored to maintain high standards despite the increased census and decreased staffing.

Last year, of the courses offered in the School of Nursing dealing with the medical aspects of disease, 78% were taught by the Medical faculty above the Resident level and 22% by the House staff. The Residents and Assistant Residents have done excellent teaching; there is the disadvantage, however, in that rarely is it possible for this group to teach the same course more than twice. This change among the instructors reduces the effectiveness of the teaching program.

There has been less turnover this year among the Nursing faculty than was true during the last few years, the only changes being two new instructors in the Clinical Specialties.

The quality of instruction which the students are receiving is exemplified by the fact that in the last two State Board Examinations, the students in this School ranked highest of all the schools in California which participated in this examination.

Questionnaires were sent to all who graduated from the School during the last ten years. Of the 325 questionnaires mailed, there were 189 replies. It was interesting to know that only 85 of the 189 are married and not active in nursing today. There are 82 working in California, 22 in other states. Of the 104 who are employed, 54 are doing institutional nursing, 3 private duty, 27 engaged in Public Health Nursing, 9 are in Doctors' offices, and 11 are employed by colleges, the Veterans Administration, the U. S. Army, and the American President Lines. Of the 54 doing institutional nursing, 35 are Staff Nurses, 12 Head Nurses, and 7 are in Teaching and Administration.

The Student Health Service, under the direction of Dr. William H. Northway, functioned very efficiently. Our program is preventive rather than curative, and all students are requested to report illness promptly and urged to practice good health habits. The number of days of hospitalization was decreased considerably this year.

Throughout the year groups of pre-nursing students from nearby high schools and colleges visited the School and Hospital. Student nurses acted as hostesses and guides. The Director of the School, the Educational Director, and students visited junior colleges and high schools for the purpose of discussing the program offered by the School, and also to interest potential applicants and assist counselors with the pre-nursing curriculum. Arrangements were made in advance, and 25 colleges throughout the state were visited. These visits will doubtless result in an increase in enrollment.


Improvements in the Nurses' Residence were made: 38 additional rooms have been painted, and new rugs were purchased for the living rooms; we received 200 Monterey type writing desks and 28 Monterey type chests which had been declared "war surplus"; 27 Simmons beds were purchased, eliminating all double deck beds from student and graduate rooms; a 16 mm. Bell and Howell Sound Projector was purchased for the use of instructors in the classrooms of the Nurses' Residence.

The "Robina Munro Bidwell Scholarship in Nursing" was established in July through a gift of \$10,000 to the University, the interest of which is to be awarded annually as a scholarship to an undergraduate student. We are very grateful for the opportunity of rewarding and assisting worthy students who might otherwise be unable to complete their course in Nursing.

The Director of the School attended the Biennial Convention of the three national Nursing organizations last September in Atlantic City.

The splendid cooperation and understanding given by the members of the Clinical Committee and Medical Faculty has been most gratifying.

Respectfully submitted,


Grace E. Ringressy, R. N.
Director, School of Nursing

SCHOOL OF MINERAL SCIENCES

At a meeting of the Board of Trustees held on November 21, 1946, the Department of Mining in the School of Engineering was merged with the Department of Geology in the School of Physical Sciences effective January 1, 1947. The merged departments became the School of Mineral Sciences, and at the same meeting of the Board of Trustees, A. Irving Levorsen was appointed Dean of the School of Mineral Sciences for the year 1946-47 beginning January 1, 1947. The establishment of the School of Mineral Sciences now combines mining, metallurgical, petroleum and ceramic engineering with geology, geophysics, marine geology and geochemistry; thus bringing together two departments which are naturally associated.

The geology staff consisted of A. Irving Levorsen, professor and dean; Simeon William Muller, Charles Frederick Park, Jr., Hubert Gregory Schenck, Aaron Clement Waters, professors; Konrad Bates Krauskopf, Ben Markham Page, associate professors; Vestress Lawrence VanderHoof (winter and spring quarters), Edgar Herbert Bailey (winter quarter), and Clifford Carl Church, lecturers; Robert Ross Compton (winter and spring quarters), Anna Martta Hietanen, George Albert Thompson, Jr. (spring quarter), and Robert Giertz Yates (winter quarter), acting instructors; Myra Keen, curator of paleontology; Robert van Vleck Anderson and Hans Karl Stauffer, research associates; A. A. Tihonravov, technician; Elsbeth Madvig and Betty Jo Cornett, department secretaries.

The mining staff consisted of Welton Joseph Crook, Orson Cutler Shepard, professors of metallurgy; Frederick George Tickell, professor of petroleum engineering; Hadley R. Bramel, acting assistant professor; A. I. Schellinger, W. Schalliol, T. O. Faine, G. C. Roinestad, and E. C. James, technical assistants; Ulysses A. Schall, mechanic; Jean Challain until March 31, 1947, subsequently Margaret L. Sogorka, department secretary.

Eliot Blackwelder, Austin Flint Rogers, Bailey Willis, professors of geology, Emeriti; Theodore Jesse Hoover, professor of mining engineering, Emeritus.

The merger of the two departments into the School of Mineral Sciences was followed by a notable growth in activity. Graduate student enrollment reached its peak during the winter and spring quarters with approximately 75 registered. In December, the Carl H. Beal Memorial Fund in Geology in the amount of \$1,000 per year, was established. In addition to the regular course and field work, an all-School three day field trip was

+ On leave of absence

taken during the spring quarter to the Feather River Canyon and the Marysville Buttes, and there were four other outstanding field trips to geologically interesting areas in California and Nevada.

An interesting seminar was held weekly during the spring quarter in which each of the Emeriti Professors in Geology gave three lectures. Professor Rogers spoke on "Silica Minerals", "Fossil Bone" and "Crystal Symmetry"; Professor Willis spoke on "Structural Provinces of the United States"; and Professor Blackwelder's subject was "Desert Processes".

The School of Mineral Sciences was host to the Cordilleran Section of the Geological Society of America when their 42nd Annual Meeting was held here April 10, 11, and 12. The Meeting was attended by about 300 scientists.

As a result of the activities of the Geology and Mining Associates, the gifts to the School have increased materially. These, together with the money available from the Valentine Fund, made possible the purchase of much needed equipment, such as microscopes, both petrographic, metallographic and binocular; lathe; X-ray; metallograph; heat treating equipment; photographic equipment; map cabinets and miscellaneous laboratory equipment of all kinds.

A summary of some of the more important activities of individual members of the School follows:

Dr. Keen continued her work of cataloguing large collections of Pacific mollusks received during and after the war. She attended the 13th Annual Meeting of the American Malacological Union at Pacific Grove, California, June 18-21, 1947. Her activities in professional organizations consisted of reappointment as a member of the Joint Committee on Zoological Nomenclature for Paleontology in America for the term 1946-1949; vice-chairman of the Pacific Coast Branch of the Paleontological Society for the year 1947-48; and President of the American Malacological Union for the year 1947-48. Miss Keen published a paper in *The Nautilus* entitled "A New Gastropod of the Genus *Episcynia* Mörch".

Professor Krauskopf resumed teaching duties at Stanford University in the autumn quarter, but was called into special war service with the Intelligence Division of the United States Army Headquarters in Tokio January 1, 1947.

With the appointment as Dean, School of Mineral Sciences, Professor Levorsen has been chiefly occupied in the organization and coordination of the two divisions, mining and geology. In December, he was elected President of the Geological Society of America. He has taken an active part in meetings of the alumni and of the Geology and Mining Associates.

Professor Muller acted as secretary-treasurer of the Faculty Research Club, and was also chairman of the Le Conte Geological Society. As vice-president of the Geological Society of America, Cordilleran Section, he had charge of arrangements for the Annual Meeting held on the Stanford campus in April. At the invitation of the Distinguished Lecture Committee of the American Association of Petroleum Geologists, Professor Muller delivered a series of lectures on Permafrost and Engineering problems before the New York Academy of Science, Yale University, University of Wisconsin, Ohio State University, Illinois Geological Society, Tulsa Geological Society and regional societies in Texas. Mr. Muller acted as informal advisor to the U. S. Geological Survey in matters pertaining to the investigation of frozen ground in the Arctic. In collaboration with Miss Keen, Mr. Muller completed a revision of the book "Procedure in Taxonomy", to be published by the Stanford University Press this fall. In collaboration with Mr. H. G. Ferguson, Professor Muller continued his research on the paleontology and stratigraphy of Northwestern Nevada. A joint paper on the Jurassic orogeny of the Mina area, Nevada, has been completed and submitted for publication.

In the fall quarter, Professor Page taught at the University of Washington, returning to take up his regular duties at Stanford in January. In conjunction with the Summer Field Geology class, of which he is director, he studied the Santa Ynez Range near Santa Barbara and continued the study of the Sand Springs Mining district in Nevada. It is expected that the results will be published. He is completing for publication by the State Division of Mines a paper on California talc deposits of steatite grade. Mr. Page was elected to membership in the Society of Economic Geologists.

Professor Park joined the staff in the autumn quarter as economic geologist after many years of service with the Metals Division of the U. S. Geological Survey. He has been occupied during the school year in reorganizing the work in ores and ground water. Mr. Park read a paper on the "American Iron Ore Industry" at a meeting of the Minnesota Section of the American Association of Mining and Metallurgical Engineers at Duluth in January and later attended the meetings of the Institute in New York. He has spent the summer in the Red River region of New Mexico where he has started a five-year study of the geology and mineral resources of the southern part of the Sangre de Cristo Range for the New Mexico Bureau of Mines.

Professor VanderHoof was appointed lecturer in Geology in January, 1947, to teach Historical Geology. During the war, he had been with the Manhattan District Project in Berkeley as physicist. Previously he had taught paleontology at the University

of California. He was reappointed lecturer for the spring and summer quarters and will become associate professor of geology, effective September 1, 1947. He has instituted one new course, Elements of Vertebrate Paleontology, and will share with Professor Muller two graduate courses in paleontology and stratigraphy. Professor VanderHoof's time has largely been spent in organizing his classes and getting together teaching materials, as well as supervising some phases of departmental improvements, such as the installation and indexing of a large map collection of topographic maps. His research program begins with a trip to Egypt during the coming fall quarter with a view toward obtaining fossil materials which will aid in stratigraphic and paleontologic studies on the Pacific Coast. On his return to the United States, he will attend the annual meeting of the Geological Society of America in Ottawa in December, as he did in 1946 at Chicago.

Professor Waters continued with the reorganization and recataloguing of the Stanford petrology collection and laboratories. He is a Councilor of the Geological Society of America and has made several trips during the past year to New York to attend the Council meetings. He is continuing his study of the Santa Ynez Range with reference to ground water supply, for the Santa Barbara Foundation.

Miss Hietanen conducted classes in petrofabrics during the year, and this summer continued her petrological research in the Feather River Canyon region.

In October, 1946, Professor Blackwelder attended the joint meeting of the American Philosophical Society and the National Academy of Sciences in Philadelphia and Washington, for a conference with visiting foreign scientists. He also attended the annual meeting of the Geological Society of America at Chicago and there read a paper on playas. In April, he read a paper before the Cordilleran Section of the Society. He was elected president of the Seismological Society of America and presented a paper at the annual meeting. In the autumn, Professor Blackwelder carried on field studies in the Mojave Desert and the plateau of northern Arizona; and in April, made a similar trip to Death Valley and western Nevada. He published one short paper and brought several others near to completion. Much of his time was devoted to community services not directly related to Geology.

During the year Professor Willis pursued his studies in the dynamics of the earth with special reference to the origin and structure of the crust of the globe. He prepared an article entitled "Artesian Salt", in which he proposed the theory that the great masses of salt which constitute the Salt Domes of the Gulf Coast were derived from artesian waters. It will be published

in the Bulletin of the Association of Petroleum Geologists, and he also published a book, "A Yanqui in Patagonia".

Robert van V. Anderson, Research Associate, was absent from late October, 1946 until early March, 1947 on a scientific trip to the eastern Mediterranean region. After a week in Greece he spent the winter in Egypt studying problems relating to the geologic history of the Nile Valley and the Libyan Desert. In May, he gave a talk on this subject before the Journal Club of the School of Mineral Sciences. A paper by him entitled "Evidence for Eocene Age of Saline Formation Beneath Salt Range Thrust" was published April 30, 1947 in Proceedings of the National Academy of Sciences, India, Vol. 16, parts 2-4, pp 169-177.

Professor Crook has been engaged in designing new laboratory courses made possible by recent acquisitions of new apparatus and equipment. A new Pyrometric Laboratory has been set up for instruction in high temperature measurements and the calibration of thermo-electric pyrometers. A new advanced laboratory course in Light Metal Alloys has been created in which the metallography, physical properties and heat treatment of commercial aluminum and magnesium alloys are investigated. Also experimental alloys are made and their physical metallurgy investigated. The courses of instruction in Metallography and in Heat Treatment have been completely revised in order to take advantage of the extensive acquisitions of new facilities. A lecture and laboratory course, extending through three quarters, in which these two subjects are combined, has been designed.

Professor Shepard's investigation of the effect of atmosphere reaction on the deterioration of metals at elevated temperatures was subsidized for one year by a grant of \$13,300 from the Office of Naval Research. Mr. George Cameron gave Professor Shepard \$180 to aid another metallurgical research project.

Professor Tickell has been engaged in a revision of his book, "The Examination of Fragmental Rocks." Publication by the Stanford Press is expected in October, 1947. With newly acquired equipment, he has redesigned laboratory courses in petroleum engineering, particularly with respect to the examination and testing of oil-well cores and fluids.

A. IRVING LEVORSEN,
Dean

SCHOOL OF PHYSICAL SCIENCES

The Department of Geology was separated from the School of Physical Sciences on January 1, 1947, leaving therein the departments of Chemistry, Mathematics, and Physics. By authorization of the Academic Council the degree of Master of Science was granted, beginning with the spring quarter, to students completing the corresponding curricula of the School.

Dr. Claudio Alvarez-Tostado served as Assistant Professor of Physical Sciences during the year. He continued work on a non-magnetic ion separator with the cooperation of Kent Dedrick, Kenneth Lincoln, and William Alfante. With Robert Gates, work on a constant volume osmometer was continued. With Professor R. A. Ogg Jr., the exchange between nitrogen dioxide and nitrogen pentoxide was studied, using radio-active nitrogen as a tracer, and the work is being extended with the use of the stable isotope. With Dr. Michell Sienko a method for the measurement of magnetic properties of non-conducting materials was developed. This work was supported by a grant from the Office of Naval Research. With Miss Susan Boulware, methods for the preparation and purification of silicon disulfide were explored.

PHILIP A. LEIGHTON
Dean

CHEMISTRY

The teaching and research staff consisted of John Pearce Mitchell, William Henry Sloan, Robert Eckles Swain, professors emeriti; Frederick Otto Koenig, Philip Albert Leighton, James Murray Luck, James William McBain, Carl Robert Noller, George Sutton Parks, professors; James Hollingsworth Clemmer Smith, Herman Augustus Spoehr (Carnegie Institution of Washington) professors (by courtesy); Hubert Scott Loring, Richard Andrew Ogg Jr., associate professors; Harry Stone Mosher, assistant professor; Carl Gustav Lindquist, George W. Schaeffer (summer), acting assistant professors; John Lawrence Bills, William Andrew Bonner, Edward Lloyd Duggan, Richard Hallenbeck Eastman, instructors; John Grissim Pierce, acting instructor; Marie-Luise Koenig, lecturer; Gerald A. Ballou (summer), A. Paul Brady, Ray C. Chandler, E. Lloyd Duggan, Manuel N. Fineman, Stewart W. Grinnell, Erik Heegaard, B. H. J. Hofstee, Eric Hutchinson, F. Allen Lucy, Evelyn Laing McBain, William A. Perkins, Carlton E. Schwerdt, Michell J. Sienko, Joseph D. Teresi, Francis X. Webster, Research associates; James M. Floeser, Conrad F. Schadt, A. Noreen Tingey, research fellows.

The Bristol-Myers Company Postdoctorate Fellowships were held by Ray C. Chandler, Manuel N. Fineman, and Eric Hutchinson; the Bristol-Myers Company Postgraduate Fellowships by Albert Britz, Alexander Kaminski, and Kenneth J. Lissant; the Colgate-Palmolive-Peet Company Fellowship by Charles G. McGee and John J. O'Connor; the Dow Chemical Company (Great Western Division) Fellowship by Howard A. Johnston; the Du Pont Fellowship by John W. Sutton; the Lever Brothers Company Fellowships by Oscar A. Hoffman and Sullivan S. Marsden, the Parke, Davis and Company Fellowship by Edward E. Ryskiewicz; the Shell Development Company Fellowship by Leslie A. McClaine; the Swift and Company Fellowship by Alice Noreen Tingey; the Frederick P. Whitaker Fellowship

by Donald M. Balcom. The David L. and Lavinia E. Sloan Memorial Scholarship was held by Richard W. Drisko and the John Maxson Stillman Scholarship by Robert W. Richardson. The Henry Windt Junior Memorial Scholarship was not awarded for the year 1946-47.

Grants in support of research were received during the year from the American Cancer Society, American Chicle Company, Bristol-Myers and Company, Chemical Corps, Cutter Laboratories, Dow Chemical Company, E. I. Du Pont de Nemours and Company, Lever Brothers, Eli Lilly and Company, National Foundation for Infantile Paralysis, Nutrition Foundation, Office of Naval Research, Parke, Davis and Company, Quaker Oats Company, Research Corporation, Rockefeller Foundation, Shell Development Co., Swift and Company, and the U. S. Public Health Service.

The department returned this year to the sponsorship of the summer research conferences which have proven so successful in bringing together leading workers in a given field for a week of informal discussion. The subject chosen this year was ammonia chemistry, both a timely subject and as a tribute to Edward Curtis Franklin and Francis William Bergstrom, Stanford Professors who pioneered in the field. The papers and speakers were as follows: "A critical review of liquid ammonia as a solvent," J. H. Hildebrand, Professor of Chemistry, University of California; "Some experiments with liquid ammonia," J. Dewald and Don M. Yost, Professor of Chemistry, California Institute of Technology; "Conductance measurements in liquid ammonia," Charles A. Kraus, Emeritus Professor of Chemistry and Director of the Metcalf Research Laboratory, Brown University; "Industrial uses of liquid ammonia," W. C. Fernelius, Professor of Chemistry, Purdue University; "Some principles and problems of liquid ammonia reactions," C. B. Wooster, Vice-President and Chemical Director of CIBA Products Corporation, Kimberton, Pa.; "Some reactions of molybdenum (VI) Oxide in liquid ammonia," G. W. Watt, Professor of Chemistry, University of Texas; "A liquid ammonia calorimeter and some heats of reaction in liquid ammonia," F. C. Schmidt, Associate Professor of Chemistry, Union College; "Some physical properties of solutions of alkali metals in liquid ammonia," W. C. Johnson, Professor of Chemistry and Department Chairman, University of Chicago; "Electronic processes in liquid dielectric media. The constitution of metal-ammonia solutions," R. A. Ogg Jr., Stanford University.

Professor Koenig in collaboration with Mr. Henry C. Wohlers began an experimental study of the surface tension of mercury in equilibrium with aqueous solutions of mercurous perchlorate and perchloric acid. This work is the extension of that done previously with Miss (now Dr.) Dolores Bandini on mercury in equilibrium with aqueous solutions of mercurous nitrate and nitric acid. In collaboration with Dr. Bandini, now at the Institute of Nuclear Research of the University of Chicago, Dr. Koenig made further progress in the application of Gibbs's adsorption theorem to the interpretation of the surface tension data in question, and prepared for publication some of the results obtained. Together with Mr. Maurice E. Mathison, Dr. Koenig worked out an electrochrometric method for determining, more exactly than previously, the concentration ratio of mercurous to mercuric ion in aqueous solutions in equilibrium with mercury. The data already obtained are useful in that they lead to a more refined interpretation of the surface tension data mentioned, than was hitherto possible. Dr. Koenig furthermore supervised the research of Mr. Charles A. Reynolds on certain pyrophosphato complex ions, which was begun a number of years ago under

Assistant Professor L. B. Rogers, now of Oak Ridge. This work, which has now been concluded, has led to an improved method for the rapid analysis of brass. Finally Dr. Koenig supervised a historical investigation by Miss Louise D. Patterson, which led to further clarification of the role of Robert Hooke (1635-1703) in the discovery of the laws of simple harmonic motion.

Professor Leighton directed two research projects under contract with the Chemical Corps, U. S. Army. Collaborating with him on this work were Stuart W. Grinnell, Wm. A. Perkins, Francis X. Webster, Wm. H. Thompson, Carl F. Hansen, Conrad F. Schadt, Bertram F. Bubbs, and Frank Pool. Under a grant from the Research Corporation, John Wilkes, with Professor Leighton, investigated the catalytic isomerization of cyclohexane, and Sigmund L. Waleszczak began a study of the Raman spectra and other properties of the aluminum halides. Professor Leighton presented research papers at Edgewood Arsenal and Camp Detrick Md., and served as a Director of the Chemical Corps Association during the year.

Professor Luck and his associates were engaged in research on proteins and enzymes. Support for the program was derived from the Rockefeller Foundation, American Cancer Society, Cutter Laboratories, Nutrition Foundation, and Swift and Company. The investigations of the previous few years on the stability of serum albumin in aqueous solution, and the binding of non-polar anions and other substances by serum albumin and serum gamma globulin were continued. Dr. Lloyd E. Duggan continued his studies on prevention of urea denaturation of serum albumin, protection against denaturation by ultraviolet radiation, and on the role of sulfhydryl groups in denaturation. Dr. J. Teresi developed a spectrophotometric dialysis-equilibrium method for studying the binding of various substances by serum albumin. By use of C^{14} -labelled caprylate, etc., the problem is being extended to compounds for which spectrophotometric analysis is not applicable. Mother Agnes Schmit completed a study of a small group of homologous isomers of increasing polarity, the purpose being to determine the effect of increasing polarity on the stabilization capacity of a substance. Carol Moore studied in some detail the phenomenon of stabilization by caprylate and mandelate. Her results were reported in a paper presented before the American Chemical Society at the San Diego Meeting of the American Association for the Advancement of Science, June 16-20. Miss Noreen Tingey continued her work on the use of glycols as protein solvents and aids in fractionation. Mr. V. Jagannathan pursued further his studies on phosphoglucosomerase and prepared a small quantity of the pure enzyme. Dr. B. H. J. Hofstee studied the enzyme urease, in particular the heightened activity of pure urease resulting from moderate heating. Miss Eleanore Frey assisted in a study of the liver proteins and focussed her work on isolation of the nucleoproteins particularly. With the collaboration of Dr. Arthur Bloomfield of the Department of Medicine a study was also initiated into the clinical acceptability of low-salt serum albumin stabilized with 0.025 M sodium caprylate. Assistance in some of the work mentioned above was rendered by technical assistants Mrs. Jean Legg, Miss Inger Jorgensen, and Miss Eleanore Frey.

Professor Luck continued to serve as editor of the Annual Review of Biochemistry, as a member of the editorial committees of Nutrition Reviews and the Journal of Biological Chemistry, as chairman of the Committee on Biochemical Nomenclature of the National Research Council¹¹.

and as a member of the Panel on Proteins Committee on Growth, National Research Council, and the Medical Fellowship Board of the National Research Council. He attended the Chicago meetings of the American Chemical Society, the American Association for Cancer Research, and the American Society of Biological Chemists.

In collaboration with Professor McBain and Dr. Evelyn McBain, Dr. R. C. Chandler was concerned with diffusion, Dr. M. N. Fineman with osmotic coefficients, and Dr. E. Hutchinson with diffusion through idealized membranes. Under sponsorship of the Office of Naval Research Dr. A. Paul Brady studied surface conductivity and interfacial films, and Dr. F. A. Lucy surface films by reflection of polarized light. Valuable technical assistance was rendered to the project by Mrs. Ann Cushman. Kenneth J. Lissant produced a dissertation dealing with solubilization, Mother Lucile John studied hydrolysis, and Sullivan S. Marsden Jr. completed an investigation utilizing non-ionic detergents and various x-ray techniques. William Sierichs investigated the solubilities of potassium soaps, Miss Harriette McHan studied a new phase of solubilization, Charles G. McGee completed a problem dealing with aluminum soaps, and Julian Nielsen carried on work dealing with diffusion of typical colloidal electrolytes.

Colver P. Dyer, on leave from the Monsanto Chemical Company, worked with Professor McBain investigating depths of surfaces. Dr. R. F. Sessions, Associate Professor of Chemistry at the University of Richmond, Virginia, returned to Stanford for the summer session to measure the effect of time on the sorption of vapors on charcoal. J.W. Sutton, collaborating jointly with Professors Parks and McBain, continued his work on specific heats and heats of transition of anhydrous sodium stearate, Oscar A. Hoffman carried further his x-ray investigations of ionic detergents, and John J. O'Connor completed a research on some properties of colloidal electrolytes.

In June, the 21st National Colloid Symposium was held at Stanford in honor of the work on colloidal electrolytes and solubilization initiated by Professor McBain, and culminated now with his retirement. A paper reporting the work of Wilder and McBain with insoluble dyes and non-ionic detergents, and papers on the work of Professor McBain with Dr. Fineman and Dr. Hutchinson were included in the program of 28 papers. In addition, Professor McBain presented papers at both the September 1946 and the April 1947 meetings of the American Chemical Society.

In January 1947 Professor McBain was elected a Fellow of the California Academy of Sciences. He was chosen as one of the American Chemical Society's "Contemporary Americans" and a short biography of him and a resume of his scientific work appeared in Chemical and Engineering News.

The research of the following students has been directed by Professor C. R. Noller: M. Azima, the synthesis of some 1-(β -picolyl)-isoquinolines; D. Balcom, the synthesis of an analog of chelidonine; V. Baliah, the synthesis of derivatives of 4-piperidine and 4-piperidinol; J. L. Bills, the synthesis of some pyridyl analogs of papaverine and their absorption spectra; R. N. Blomberg, the composition of the sterol fraction of human blood plasma; M. J. Diamond, the antidiabetic principle of *Scoparia dulcis*; P. J. Hearst, the dehydration products of the amyriins; C. D. Heaton, the synthesis of compounds that will provide a test of some theories in stereochemistry; W. L. Jensen, the application of a new method for the synthesis of organic phosphonic

acids; H. Lew, the synthesis of thiophene analogs of the sulfanilamides; K. Raymond, the constituents of the seed fat of *Sapindus mukorossi*; M. Seeley, the constitution of the dehydration product of chlorogenin; R. Steffgen, the action of hydrochloric acid on diphenyl-p-phenylenediamine; R. M. Summers, a modification of the synthesis of tryptophane,

During the past year Professor Noller has served on the Committee on Professional Training of Chemists of the American Chemical Society, as a councillor of the California Section of the American Chemical Society, and on the Advisory Board of Organic Syntheses.

Professor Parks has continued his extensive studies dealing with the thermodynamics of organic compounds. With Mr. Leslie A. McClaine, the equilibrium between cyclohexanol, cyclohexanone and hydrogen has been investigated and equilibrium constants have been accurately measured at four temperatures between 150° and 218° C. With Mr. John R. Mosley, precise measurements have been made for the heats of combustion of polythene, benzophenone, furfuryl alcohol, cyclopentanol, and cyclohexanol. These results are accurate to within 0.04 per cent. A heat capacity study of furfuryl alcohol has been initiated by Mr. R. R. Gates, using the Nernst method and covering the temperature range from 77° to 300° Kelvin. This investigation, as yet not fully completed, should yield a reliable value for the entropy of the alcohol, which is now becoming increasingly important from a commercial standpoint. With Mr. Leland Vaughan, vapor pressure measurements have been carried out on cyclohexanol, cyclohexanone, and furfuryl alcohol by the isoteniscope method.

For work in a field of mutual interest to Professors McBain and Parks, Mr. John W. Sutton has been developing an apparatus to determine the heat capacities, and heats of fusion and transition for various organic substances, including soaps, at temperatures between that of the room and 300° C.

During May 1947 Professor Parks, serving as Associate for the American Chemical Society Committee on Professional Training, spent four days in an inspection visit to the University of Utah and the Utah State Agricultural College.

Associate Professor Loring conducted two main lines of investigation during the past year, namely (1) further studies on the concentration of the Lansing strain of poliomyelitis virus and on the use of formaldehyde inactivated concentrated virus as a vaccine in cotton rats, and (2) further studies on the chemistry and metabolism of ribonucleic acids. In the first mentioned work he was assisted by Dr. Carlton E. Schwerdt, Dr. Jane Collier Anderson and Mrs. Nancy Lawrence. In the work on ribonucleic acid he was assisted by the following graduate students: Syed Ashraf Ali, Henry W. Bortner, Robert S. Cox Jr., James L. Fairley Jr., Robert V. Lashbrook, James McT. Floeser, and Raymond E. Willkerson, and the following undergraduate students: DeLoret Meyer and Mary Alberta Rhein.

The work on poliomyelitis virus has progressed to the point where the concentrated virus has been characterized in a number of ways, and it has been shown that cotton rats may be protected against large doses of active virus after immunization with the formaldehyde-inactivated concentrated virus. This work was aided from September to June by the National Foundation for Infantile Paralysis and from July through August by a grant from the Eli Lilly Company, Indianapolis. The work on ribonucleic acid has been concerned with a simplified method for the prepr

ration of uridine, the ultraviolet absorption spectra of the pyrimidine nucleosides and nucleotides, and the analysis of ribonucleic acids from yeast, tobacco mosaic virus, wheat germ, liver, *Neurospora*, and *Penicillium* for adenine, guanine, and the pyrimidine nucleosides and nucleotides. The results show several differences between these ribonucleic acids and indicate that the older idea of a statistical tetranucleotide must be revised. Further work was also accomplished on the nature of ribonucleinase action on ribonucleic acid. These investigations were aided by a grant received from the Rockefeller Foundation.

Associate Professor Loring attended and took part in a Round Table Conference on Mechanisms of Immunity in Poliomyelitis, Department of Epidemiology, The Johns Hopkins University, September 17 and 18, 1946. He also gave lectures before the George William Hooper Foundation staff, January 21, 1947, and the California Section of the American Chemical Society at Berkeley, April 14, 1947. He arranged the symposium program on the Chemistry and Metabolism of Nucleic Acids and their Constituents, and served as chairman for the American Society of Biological Chemists at the Federation Meetings in Chicago May 20, 1947.

Associate Professor Ogg, with Dr. M. Sienko, Donald Loeffler, Harold Eding, and Robert Fristrom, continued studies dealing with the constitution of metal-ammonia solutions. This work was sponsored by the Office of Naval Research. Dr. Claudio Alvarez-Tostado was a participant during the summer quarter. Particular attention has been paid to the electrical conductivity of the solutions, and to their absorption spectrum. In connection with the latter phase, Professor Ogg spent four weeks during the summer quarter at the Metcalf Research Laboratory of Brown University, making use of special infra-red spectroscopic equipment.

In addition to the above program, studies on reaction kinetics in gaseous systems were continued. Progress has been made on a new approach to the classical problem of the decomposition of nitrogen pentoxide. With Mr. Julius Roth, further studies were made on the effect of high velocity fragments in the photodecomposition of hydrogen iodide.

Professor Ogg presented a paper at the Symposium on Liquid Phenomena at the April meeting of the American Chemical Society in Atlantic City, and colloquium addresses at the University of California, Princeton, Brown and Duke Universities, the University of Toronto and the National Research Council Laboratories at Ottawa, Canada.

Under the direction of Assistant Professor C. G. Lindquist, courses in the Principles of Chemical Engineering were again offered, and, after a lapse of three years, the program of development of this subject at Stanford was renewed. Professor Lindquist carried on research on the continuous measurement of viscosity of fluids flowing in industrial pipe lines, with Ralph Duniway, on the flow characteristics of liquids of anomalous viscosity, with E. S. Johnson, and on the basic laws of the rate of filtration, with John Youle.

Assistant Professor Mosher initiated a program of research in the field of organic nitrogen compounds with special emphasis on the importance of the products as possible synthetic drugs. In collaboration with Milton Frankel and Edward Ryskiewicz, and under sponsorship of Parke, Davis and Company, a project has been started on the synthesis of possible analgesic drugs (morphane substitutes). With

Miss Mary-Elizabeth Holbrook, Albert Cane and Gunter S. Jaffe, certain compounds are being studied which combine the molecular fragments of several well-known antimalarials and as such hold promise of enhanced activity in the treatment of malaria. Mr. Knight Raymond, with Professor Mosher, has been occupied with a study of methods that may be useful in the synthesis of drugs for the chemotherapy of tuberculosis.

Instructor Bonner continued his studies on the stereochemical configuration of the first carbon atom in xylosylbenzene, and initiated an investigation of the action of bromide ion on acetyl halogen sugars in non-aqueous media.

Dr. Bonner was engaged in research with Richard W. Drisko on oxidations of sulfur-containing sugars; with James M. Craig on the action of Grignard reagents on methylated sugars, and reactions of glycosylaromatic hydrocarbons; with Everett M. Doss on the action of dieconophiles with α, β -unsaturated carbonyl compounds, and on the action of sodium hydride and calcium hydride on acyl and aroyl halides; with Robert Halstead on the derivitization of organic acids with *s*-1-naphthylmethylthiuronium chloride; with Philip K. Lindaay and Malcolm P. Youker, on the constitution of California sage-brush oil; with Malcolm P. Youker on an improved synthesis of mono-, di-, and tribenzylamine; with Ann Robinson on the synthesis and properties of selenium-containing glycosides; with Robert Olsen, on the identity of "x-benzylphenanthrene"; with Paul E. Stewart, on the polarographic reduction of nitroalkanes; and with Yee Sing Yee, on the action of sodium acetylde on acetohalo sugars. He attended and presented a paper at the Chicago meeting of the American Chemical Society.

Instructor Eastman engaged in a study of the preparation and reactions of furanes, an investigation of possible higher valence states of the sulfur atom in organic compounds, and a study of the constituents of natural peppermint oil. With Francis L. Detert, an investigation of the diazonium-coupling of 2,5-dimethylfuran has been completed. On the problem relating to the valence of the sulfur atom, a new type of thiophene sulfone has been prepared with the help of Robert M. Wagner; and Howard S. Johnston has made good progress toward the synthesis of a bicyclic sulfonium salt with the sulfur atom at a bridgehead. The work on peppermint oil is being carried out with Miss Charlotte Green and is sponsored through the Stanford Research Institute.

Dr. John Grissim Pierce held one of the four nationally awarded American Chemical Society Postdoctoral Fellowships, and also served as acting instructor in Biochemistry during the year. In collaboration with Professor Loring he investigated several phases of nucleic acid chemistry. He attended and presented a paper at the Chicago symposium on nucleic acids of the American Society of Biological Chemists.

At the close of the academic year, Professor James W. McBain, completing twenty years of active duty in the Department, became Professor Emeritus; Associate Professors Loring and Ogg were promoted to professorships, and Instructor Bonner was promoted to the rank of assistant professor. Dr. Edward L. Duggan resigned to accept an appointment at the University of California. Dr. Harry S. Mosher, formerly assistant professor in chemistry at Pennsylvania State College, and Dr. Richard H. Eastman, formerly private research assistant to Professor R. B. Woodward at Harvard University, joined the staff as assistant professor and instructor, respectively.

One hundred and six graduate and eighty-one undergraduate students registered as majors in the Department during the year. Five doctor's

and eighteen master's degrees were awarded. Forty-seven papers on research and other scholarly activities were published and fourteen official reports on Government sponsored research contracts were submitted by staff members during the year.

PHILIP ALBERT LEIGHTON
Executive Head

BIOCHEMISTRY

Associate Professor Loring conducted two main lines of investigation during the past year, namely (1) Further studies on the concentration of the Lansing strain of poliomyelitis virus and on the use of formaldehyde inactivated concentrated virus as a vaccine in cotton rats, and (2) Further studies on the chemistry and metabolism of ribonucleic acids. In the first mentioned work he was assisted by Dr. Carlton E. Schwerdt, Dr. Jane Collier Anderson and Mrs. Nancy Lawrence. In the work on ribonucleic acid he was assisted by the following graduate students, Syed Ashraf Ali, Henry W. Bortner, Robert S. Cox, Jr., James L. Fairley, Jr., Robert V. Lashbrook, James McT. Ploeser, and Raymond E. Wilkerson, and the following undergraduate students, DeLorez Meyer and Mary Alberta Rhein.

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During the year Associate Professor Loring also collaborated with Dr. John Grissim Pierce, American Chemical Society Post-doctorate Fellow and Acting Instructor in Biochemistry on several phases of nucleic acid chemistry. Dr. Pierce also attended the symposium on nucleic acids

and presented a paper on Purine and Pyrimidine Antagonism in the Pyrimidine-deficient *Neurospora* No. 1298.

Professor Luck and his associates were engaged in research on proteins and enzymes. Support for the program was derived from the Rockefeller Foundation, American Cancer Society, Cutter Laboratories, Nutrition Foundation, and Swift and Company. The investigations of the previous few years on the stability of serum albumin in aqueous solution, and the binding of non-polar anions and other substances by serum albumin and serum gamma globulin were continued. Dr. Lloyd E. Duggan continued his studies on prevention of urea denaturation of serum albumin, protection against denaturation by ultraviolet radiation, and on the role of sulfhydryl groups in denaturation. Dr. Joseph Teresi developed a spectrophotometric dialysis-equilibrium method for studying the binding of various substances by serum albumin. By use of Cl¹⁴-labelled caprylate, etc., the problem is being extended to compounds for which spectrophotometric analysis is not applicable. Mother Agnes Schmit completed a study of a small group of homologous isomers of increasing polarity, the purpose being to determine the effect of increasing polarity on the stabilization capacity of a substance. Carol Moore studied in some detail the phenomenon of stabilization by caprylate and mandelate. Her results were reported in a paper presented before the American Chemical Society at the San Diego Meeting of the American Association for the Advancement of Science, June 16-20. Miss Noreen Tingey continued her work on the use of glycols as protein solvents and aids in fractionation. Mr. Venkataraman Jagannathan pursued further his studies on phosphoglucosomate and prepared a small quantity of the pure enzyme. Dr. Hofstee studied the enzyme urease, in particular the heightened activity of pure urease resulting from moderate heating. Miss Eleanor Frey assisted in a study of the liver proteins and focussed her work on isolation of the nucleoproteins particularly. With the collaboration of Dr. Arthur Bloomfield of the Department of Medicine a study was also initiated into the clinical acceptability of low-salt serum albumin stabilized with 0.025 M sodium caprylate.

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The Identification of Three Mononucleotides from Tobacco Mosaic Virus Nucleic Acid. C. E. Schwerdt and H. S. Loring, *J. Biol. Chem.* 1947, 167, 593.

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Oxidative decomposition of Vitamin A. II. Absorption spectrophotometry of oxidized Vitamin A. J. M. Luck and R. A. Bolomey, *J. Biol. Chem.* 169, 331-335, July 1947.

PHYSICS

The resident staff consisted of professors Felix Bloch, William Webster Hansen, Paul Harmon Kirkpatrick and David Locke Webster; acting professor John Clarke Slater (summer quarter); research professor Cornelis Bol; associate professor Hans Heinrich Staub; assistant professors Seville Chapman, Marvin Chodorow and Edward Leonard Ginzton.

Instructors Richard Ingels Condit, Boris A. Jacobsohn and David Bowman Nicodemis; research associates Clarence G. Carlson, Arthur E. Harrison, Richard Alva Huggins, Cary Bodley Jones, William Robert Kennedy, Elliott Charles Levinthal, Paul Alfred Pearson, Richard Freeman Post, Herbert John Shaw, and Russell Harrison Varian; teaching and research assistants Dwight Allan Caswell, Charles Wogan Durieux, Jerome Fleeman, David Harrison Garber, Roy Wesley Hendrick, Jr., John Frederick Kane, Carson Dunning Jeffries, Joseph Karl Mann, Warren George Proctor, Roald Klinkenberg Wangness; teaching assistants Arthur Irwin Berman, Luis David Bolinger, Karl Leslie Brown, David Smedley Colburn, Carl Frederick Hansen, Richard Henry Helm, Alvin Maynard Hudson, Ward Os Mathews, William Tyrrell Mooney, Jr., Ivan Robert Neilsen, Carol Marilyn Newton, Melvin Jesse Nielsen, Leonard Moos Rieser, James Hammond Smith; research assistants Wayne Gordon Abraham, Albert Vinicio Baez, Harold Brown, Leroy H. Franklin, Paul Stone Goodwin, Hubert Heffner, John Henry Jasberg, Albert Yick Jew, Stanley Francis Kaisel, Peter D. Lacy, Martin Everett Packard, Howard Hunt Pattee, Jr., Hiliard Roderick, Ray William Sanders, Fred Walcutt Terman, John Jerome Wedel, Jr.; mechanics Eldon Hibbert Lockhart, John Schultz, Burton George Stuart, Edward Aloysius Wright; secretaries and secretarial assistants Anna Laura Berg, Janet Elsie Buck, Rosemary Rahn Daenitz, Ruth Ann Kope, Marylee Armstrong Post; demonstration assistants Walter M. Newcomb and Werner Goldner; custodian Joseph Francis FitzGerald. Twenty-seven readers and twenty-four occasional assistants in laboratory, shop, and office were employed upon an hourly basis.

Professor Norris Edwin Bradbury was on leave throughout the year, serving as Director of the Los Alamos Scientific Laboratory of the Manhattan Engineer District.

The total number of individuals enrolled in lower-division courses during one or more quarters was about 700. In upper-division courses the aggregate course enrollment (greatly exceeding the number of individuals enrolled) was 574. Bachelor's degrees were earned by seven physics majors and the Ph.D. by one. The number of individuals enrolled as graduate or undergraduate physics majors was 68.

Physics enrollments were up by a larger percentage than were those of the University generally. This situation, combined with the great present interest in elaborate forms of research, requiring large equipment and teams of workers, produced an inefficient state of congestion which was relieved at the end of the year by the occupation of a part of the second-floor area vacated by the Department of Psychology.

Professor Bloch extended his theoretical and experimental investigations of the magnetic properties of atomic nuclei by the original method now generally known as nuclear induction, achieving more sensitive methods of measurement and applying them in the determination of the magnetic moments of the nuclei of two species of heavy hydrogen atoms. This work, in which Mr. Packard and Mr. Levinthal collaborated,

attained a precision of measurement of one part in one hundred thousand. It is difficult, if not impossible, to cite a precedent for such precision in any measurement of an atomic property by newly developed methods. The investigation of the hydrogen of thrice normal mass was carried out at the principal source of this material at the Los Alamos Scientific Laboratory. This work, like much other research of the Department, was supported through contracts with the Office of Naval Research.

With Mr. Jacobsohn and Mr. Wangness, Professor Bloch pursued the theory of the nuclear induction process. He also collaborated with Professor Staub and Dr. Nicodemus in a precision measurement of the magnetic moment of the neutron by a method utilizing neutrons produced in the cyclotron. Although the measurements were not completed, significant and encouraging results, indicating an accuracy of 1/50%, were obtained.

Professor Bloch attended a meeting of nuclear physicists, called at Washington, D. C. by the Office of Naval Research, contributing a paper on Stanford nuclear researches. He also spoke, by invitation, upon nuclear radio-spectroscopy at the July meeting of the American Physical Society held at Stanford.

Professor Hansen, in collaboration with Professor Ginzton and Mr. Kennedy, put in operation a preliminary electron accelerator model. Its successful operation confirmed a large amount of involved design theory and gave assurance of the possibility of constructing accelerators of greatly increased electron energy. This research is being pushed forward vigorously with the assistance of Mr. Post, Mr. Caswell and Mr. En-Lung Chu.

Further progress was made by Mr. Kees Bol and Professor Hansen on the measurement of the speed of electromagnetic waves in space, a project to which Professors Ginzton and Chodorow also contributed assistance. While engaged in this work Mr. Bol held the Academy of Time fellowship, a gift of the Benrus Watch Company.

Mr. Theodore Veltfort studied a new type of pulse line and Mr. Neilsen developed equipment for the measurement of very high power outputs under Professor Hansen's direction.

Earlier experimental and theoretical work of Professor Webster and collaborators upon the K-ionization of nickel atoms by electron bombardment has been supplemented by his recent study of the relativity effects to be expected in such collisions upon replacement of nickel by a very heavy element. Primarily, however, Professor Webster's work for this year has been related to teaching. His autumn and spring-quarters were devoted entirely to the reorganization of advanced courses in electromagnetic theory and x-rays, and parts of the winter and summer quarters to related work for the American Association of Physics Teachers. This included referee work for its journal (*AMERICAN JOURNAL OF PHYSICS*) on papers on electricity and active membership in its Coulomb Committee, which is making a comprehensive study of possible improvements in teaching on electricity. He also formulated the results of a prewar study of innovations in physics teaching to reduce risks in aviation—these innovations being credited by returned military pilots with a high degree of success. Professor Webster was a member of the Board of Editors of *THE REVIEW OF MODERN PHYSICS*. A vacation trip included a Coulomb Committee conference at St. Johnsbury, Vermont, some work for the Army at Aberdeen Proving Ground, Maryland, and conferences at Ludington, Michigan, and

Chicago, in which he accepted an invitation to write a new version of the general article, "Electricity," for the *Encyclopaedia Britannica*.

Professor Staub played a leading part in the determination of the neutron moment, and in collaboration with Professor Bloch and Dr. Condit carried out a successful measurement of the polarization of neutrons by ferromagnetism. During spring and summer quarters he was on leave abroad, where he responded to requests for lectures on nuclear subjects before groups at the Federal Institute of Technology at Zurich, the Physical Society of Zurich, the University of Basle, and the Atomic Energy Research Establishment of the British government. He also made progress with his share of a projected handbook of experimental nuclear physics, which is to appear under distributed authorship.

Professor Chapman reorganized a large part of the lower-division laboratory instruction, principally that of the pre-engineering course sequence. He developed and installed new equipment adapted to our large present enrollments, and of generally improved precision and quality. He prepared the booklet, "How to Study Physics," which has proved useful not only to his technical and engineering students but also to those taking the other lower-division physics series.

During the summer Professor Chapman made an extended trip to research centers throughout the country where interest in the problems of atmospheric electricity is to be found. Upon another occasion, accompanied by Mr. Roy Hendrick, he spent four weeks in Ohio measuring electric fields in thunderclouds. With the help of student assistants he has developed methods of investigating electric fields in thunderstorms by free sounding balloons equipped to transmit data instantaneously by radio. These methods, adaptations of Weather Bureau radiosonde techniques, were tested in Ohio thunderstorms and found satisfactory.

Professor Ginzton handled most of the direct administration of the microwave laboratory and was exceedingly effective in the acquisition of surplus equipment from government and other sources. His reorganization of the department shop has vastly improved its efficiency.

Many of the research projects of the microwave laboratory were under the joint supervision of Professors Chodorow and Ginzton. These included Mr. Abraham's investigation of electronic loading in klystron cavities, Mr. Lacy's investigation of shot noise in electron beams at microwave frequencies, Mr. Mann's study of focussing of high-density electron beams and his researches with Mr. Kane upon impedance measurements, the investigation of a new type of broad-band amplifiers by Mr. Jasberg and Mr. Horton, the theoretical studies and measurements of antennas with arbitrary current distribution conducted by Mr. Shaw, the measurements of impedance in klystron cavities by Mr. Wedel, Mr. Pearson's investigation of cavities by means of a velocity spectrograph, Mr. Goodwin's investigation of a coaxial directional coupler, and the high-frequency Hall-effect measurements of Mr. Roderick.

Mr. DuIs Bolinger made good progress with the problem of absolute x-ray intensity measurement proposed to him by Professor Kirkpatrick. The problem of focussing x-rays, and thus opening up a field of x-ray microscopy, was attacked by Professor Kirkpatrick with the assistance of Mr. Baez. A method of producing x-ray images was discovered and a program of refinement and development was started.

Mention was made of the participation of staff members in professional activities external to the Department. It may be added

that Professor Kirkpatrick attended the January meetings of the American Physical Society and the American Association of Physics Teachers in New York City, delivering a contributed paper before each group. As Vice-President of the latter association he arranged the programs of the meetings, and as President-elect he presided and participated in several scientific and business sessions. In June he attended the Minneapolis meeting of AAPT. Professor Chapman was also in attendance and presented a contributed paper. The July meeting of the American Physical Society at Stanford heard contributions from Professor Chapman and Mr. Abraham. Professor Hansen attended the Washington meeting of the American Physical Society in May. He fulfilled lecture invitations at Los Alamos Scientific Laboratory, Massachusetts Institute of Technology, and University of California. Professors Chapman and Kirkpatrick were frequently called upon to speak before general audiences upon popular aspects of atomic energy. Professor Kirkpatrick appeared before Stanford Alumni Association audiences at Seattle, Portland and Los Angeles.

PAUL KIRKPATRICK
Executive Head

MATHEMATICS

The staff of the department consisted of Gabor Szego (Executive Head, autumn, spring and summer quarters), George Polya (Acting Executive Head, winter quarter), Albert C. Schaeffer (on leave), Donald Clayton Spencer (on leave), James Victor Uspensky¹, professors; Hans Rademacher (University of Pennsylvania), acting professor (summer quarter); Harold Maile Bacon, associate professor; Max Shiffman (New York University), acting associate professor (summer quarter); Albert Hosmer Bowker (winter, spring and summer quarters), assistant professor of Mathematical Statistics; John George Herriot, assistant professor; Lulu Hofmann Bechtolsheim (University of Redlands)(summer quarter), Herbert Solomon (winter, spring and summer quarters), acting assistant professors; Mary Virginia Sunseri, instructor; Albert V. Baez, Arthur Grad, Fritz Steinhardt (summer quarter), Robert Weinstock, acting instructors; Samuel A. Francis (San Mateo Junior College), Sarah T. Herriot, lecturers; Michael I. Aissen, Wray G. Brady, David C. Haley, Mary T. Huggins, Benjamin Lepson, Burnett C. Meyer, Albert B. J. Novikoff, Gordon M. Petersen, Charles C. Stone, Betty M. Ullman, Joseph Ullman, teaching assistants; Virginia S. Boles, secretary, librarian and student adviser in the department.

The degree of Master of Arts was conferred on two candidates with theses as follows: Maria Zbigniew Krzywo-blocki, "A Local Maximum Property of the Fourth Coefficient of Schlicht Functions"; Dorothy Edna Pearson, "An Empirical Investigation on the Reality of Roots of Certain Equations". After the winter quarter of this year the degree of Master of Arts in the School of Physical Sciences became the degree of Master of Science. In June the new degree of Master of Science was conferred on two candidates with theses as follows: Hui-choung Lee, "An Application of Conformal Mapping"; Gordon Marshall Petersen, "On the Third Coefficient of Bounded Schlicht Functions"

The sudden death of Professor Uspensky after a brief illness in January was a great loss to the department. The manuscript for his book, "Theory of Equations", had just been completed and is now in press with the McGraw Hill Publishing Company. His book on "Probability" is being translated into Spanish for publication by an Argentine publisher. During the autumn quarter Professor Uspensky had been in collaboration with Professor S. Timoshenko preparing a book on Differential Equations. Professor Uspensky's class work for the remainder of the winter quarter was carried on by three members of the department who volunteered to do this teaching.

Professor Szego read a paper at the meeting of the American Mathematical Society in Los Angeles in November,

¹Deceased, January 27, 1947

"On an Inequality due to P. Turan concerning Legendre Polynomials". He also read a paper at the meeting of the same Society at Swarthmore College in December, "The Capacity of a Circular Plate-condenser". In January he gave a talk at Washington University, St. Louis, Missouri, "On Electrostatic Capacities". Professor Szego participated in the Courses in Mathematical Statistics offered in the first summer session at the University of California at Berkeley, giving two lectures on Orthogonal Polynomials and the Problem of Moments. He was Acting Dean of the School of Physical Sciences during the summer quarter. He served on various committees of the American Mathematical Society.

Professor Polya was a member of the Stanford Committee on Instruction in Statistics. He is president for 1947 of the Northern California Section of the Mathematical Association of America. At the meeting of this Society in San Francisco in January Professor Polya read a paper, "Estimating Electrostatic Capacity". He read a paper at the meeting of the American Mathematical Society at Stanford in April, "On Virtual Masses". Professor Polya was elected Corresponding Member of the French Academy on July 7.

Professor Schaeffer and Professor Spencer presented a joint paper, "A General Class of Problems in Conformal Mapping", at the meeting of the American Mathematical Society at Stanford in April. Professor Schaeffer continued as an associate secretary of the American Mathematical Society during the year. He presented a paper at the joint meeting sponsored by Harvard University and The Office of Naval Research at Harvard University in January, "On Large Scale Digital Computers".

Professor Spencer delivered the invited hour address at the meeting of the American Mathematical Society at Los Angeles in November entitled "Outstanding Problems in Conformal Mapping".

Professor Bacon was a member of the following Stanford Committees: Executive Committee, Committee on Graduate Study, Student Health Fund Committee, Stanford Athletic Council, Panel of Lower Division Advisers, Chairman of the Committee on Student Affairs. He was a member of the Joint Committee on Mathematical Education, Northern and Southern California Sections, Mathematical Association of America. Professor Bacon gave an invited address to the Mathematics Section of Sonoma County Teachers' Institute, Santa Rosa, in November, on "Three Famous Problems - Duplication of the Cube, Trisection of the Angle, Squaring of the Circle".

Professor Herriot spoke at the meeting of the Northern California Section of the Mathematical Association of America held in San Francisco in January on "Some Problems in Aerodynamics".

Professor Bowker joined the staff of this department at the beginning of the winter quarter as Assistant Professor of Mathematical Statistics. During the spring

quarter he taught a course in the Economics Department, Economics 160, Advanced Statistics.

Professor Solomon read a paper at the meeting sponsored by the Institute of Mathematical Statistics and The American Society for Quality Control held in San Diego in June on "Sample Inspection by Variables".

The second Stanford University Competitive Examination in Mathematics was given simultaneously at 39 California high schools on April 19, 1947, 2 to 5 p.m. It was accessible to students of any high school in the State and was taken by 196 participants. Four problems were proposed. A one-year scholarship of \$500 was awarded by Stanford University for the best paper to Miss Maxine Steineke, Palo Alto High School. Two other contestants received "Honorable Mention": Mr. Jerold B. Weller, Alexander Hamilton High School, Los Angeles, and Mr. Raymond M. Hendricks, Santa Barbara High School.

The activities of the Mathematics Club were resumed this year with meetings every two weeks. Talks were given by faculty members and students.

The Mathematics Seminar in the Theory of Potential and Conformal Mapping conducted by the staff of the department continued active through all four quarters of the year. Outside speakers included Professor Van der Pol, Holland, who spoke on "An Electromechanical Investigation of the Riemann Zeta-Function in the Critical Strip", and Dr. M. Schiffer, professor at the University of Jerusalem, who gave two talks, "Conformal Mapping" and "Variational Methods in the Theory of Potential".

Visiting lecturers sponsored by the department included: (1) Dr. J. H. Curtiss, Assistant to the Director of the National Bureau of Standards, U.S. Department of Commerce, who gave a talk on December 5 on "Electronic Computing Machines"; (2) Dr. M. Riesz, professor of Mathematics at the University of Lund, Sweden, who delivered a series of four lectures in July as follows: "The Wave Equation", "The Relativistic Theory of the Electron", "Lorentz Transformations and Clifford Numbers", "Mixed Volume and Elementary Divisors in Point Lattices"; (3) Dr. H. Cramer, professor of Mathematics at the University of Stockholm, Sweden, who lectured on July 19 on "Stochastic Processes".

Professor Jose Luis Massera from the Instituto de Matematica y Estadistica of the Universidad de la Republica at Montevideo, Uruguay, a fellow of The Rockefeller Foundation for 1946-47, spent a part of the year in research in this department.

Dr. G. Julia representing the French Academy and Dr. L. Godeaux representing the Belgian Academy visited this department in the winter quarter.

We are grateful to announce that with the anonymous donation of \$2722.85 which was made in 1945-46 to the Mathematics department and additional funds furnished by the administration of the University, many improvements

in the instructional and research facilities have been carried out this year. Half of the funds were used for the acquisition of books and periodicals for our library. The other half was used to make much needed improvements in the physical facilities of the department, such as new electric installations to secure more adequate lighting and the painting of the class rooms and offices.

The department is pleased to announce that arrangements have been completed this year to bring Professor Harold Davenport of University College, London, England, to this department as visiting professor during the coming academic year.

In addition to the academic program of the department above, three projects sponsored by the Office of Naval Research and located at Stanford were supervised by six professors from this department.

(1) Professor Szego who devoted full time during the winter quarter and part time during the remaining quarters and Professor Polya who devoted full time during the summer quarter and part time during the regular year supervised the Mathematics Project "Dependence of the Capacity on the Geometric Form of the Conductor". The purpose of this project is to find bounds for the capacity of a conductor in terms of more easily computable geometric quantities, such as the volume of the conductor, the area of its surface or its average width. The investigation has been extended to other physical quantities of singular nature, such as the torsional rigidity of a shaft, the fundamental pitch of a vibrating membrane, etc. The project will be continued through the next academic year. Professor Herriot worked during the summer quarter full time on this project. As computers and assistants served: N. Ankeny, M. Aissen, J. Ullman, B. Ullman.

(2) Professor Spencer and Professor Schaeffer were on leave of absence for the year and devoted their entire time to the Mathematics Project "Conformal Mapping". The purpose of this project is to make a systematic study of extremal problems in conformal mapping, with special emphasis on the problem of determining the exact regions of variability of various functionals of the mapping and of characterizing the mapping functions which correspond to the boundaries of these regions. The problem has been attacked by variational methods which lead generally to non-linear differential equations for the extremal functions. An intensive study of these equations has been made, and in some instances the exact regions of variability have been determined. A program of numerical computation was carried on throughout the year under the direction of Mr. Arthur Grad with the part-time assistance of several computers. Exploratory numerical computation has been applied to problems which appear too involved for direct theoretical analysis. Much of the numerical data will be used as a basis for further more elaborate computations using an electronic computing device.

(3) Professor Bowker and Professor Solomon who joined the staff at the beginning of the winter quarter have devoted practically their full time to the Statistical Project "Sample Inspection by Variables" which began January 1, 1947. The primary objective of the project is to construct tables for use in acceptance sampling by variables. Primary attention is being given to the situation in which an item is considered defective if the quality measured lies outside a pre-assigned range. A set of single sampling tables has been prepared, and work on double and multiple sampling plans is under way. Work on practical techniques of applying the plans is being carried on by the School of Engineering. Personnel of the research project have been consulting informally on statistical problems arising in research in various departments of the University. Professor Bowker and Professor Solomon have been aided in this work by one research associate, three research assistants and two computers.

GABOR SZEGO
Executive Head

ELECTRON OPTICS

The five-year period of support of this activity by Rockefeller Foundation was concluded before the opening of the academic year. Professor L. Marton departed in the summer of 1946 and the Division of Electron Optics ceased to operate. Stanford Research Institute offered to take over the inventory and functions of the Electron Optics laboratory, and upon recommendation of the Electron Microscope Committee, this transfer was made during the summer quarter.

Paul Kirkpatrick
Chairman
Electron Microscope Committee

SCHOOL OF SOCIAL SCIENCES

The Executive Committee of the School in 1946-47 was as follows: Merrill K. Bennett (Dean), Food Research Institute; Chilton R. Bush, Journalism; Charles Fairman, Political Science; Bernard F. Haley, Economics; Ernest H. Hilgard, Psychology; Charles N. Reynolds, Sociology; and Edgar E. Robinson, History.

Appointment as Acting Instructor for the year was held by Rene B. Jackson. Freda B. Wallin served as Lecturer in the winter quarter.

Total enrollment of graduate and undergraduate students majoring in constituent departments of the School and in programs administered by it stood at new heights throughout the year, reaching a peak of 1,187 in the spring quarter as compared with 768 the year before. The ratio of School majors to all students registered in the University rose from under 13.5 to nearly 17 per cent.

Total enrollment of students in programs administered by the School was 218 at the peak in the spring quarter. The distribution between the four programs was as follows: General, 140; International Relations, 62 (including 20 graduate students); Preprofessional Social Service, 13; Teacher Training, 3. The revised program in International Relations, operating for the first time in 1946-47, thus attracted a substantial registration of students. Enrollment of graduate students was especially noteworthy; as the year closed, direction of their theses had begun to present a problem to the Committee in charge of the program, of which Professor Buck (Political Science) served as chairman. On the other hand, student enrollment was low in the newly-inaugurated Program for Teachers of Social Studies (Secondary Schools).

The degree of Bachelor of Arts was conferred upon 98 students in School programs during the first three quarters of the year, and the degree of Master of Arts upon three (in International Relations). Five students graduated with great distinction and nine with distinction.

Standing committees of the School were active during the year. Under the chairmanship of Professor Stone (Psychology), the Committee on Graduate Study absorbed and performed the function of supervising distribution from the Spelman Fund of grants-in-aid of social-science research. The Committee on Curriculum, under the chairmanship of Professor Brand (History), devoted particular attention to revision and restatement of requirements in the School-administered General Program. The number of advisers in School programs was enlarged in order to permit closer contact with students and more exhaustive consideration of their problems.

Revised requirements for the General Program were approved by the Executive Committee and adopted by the Faculty of the School in March 1947, to become effective in the coming autumn quarter. At the same time provision was made whereby special programs planned in advance were made accessible to qualified students. The revised General Program is designed for students "wishing to pursue a broad educational program emphasizing the social sciences without concentrating upon a particular branch of the social sciences to the extent required of departmental and divisional majors." It specifies a number of elementary required courses, enlarges the amount of Upper Division work required, and increases the total number of

units in the concentration. The success of this effort at once to assure the student a wide coverage of fields of instruction and to preserve an appropriate degree of subject-matter concentration remains to be seen.

Courses of instruction under the auspices of the School were the sequence Social Science 101, 102, and 103, "Introduction to Social Service," taught by Mrs. Jackson in each quarter except summer, with enrollment of 11 to 15 students; and the course Social Science 120, "Marriage and the Family," directed by Mrs. Wallin in the winter quarter, with an enrollment of 103 students.

Activities of the several constituent departments and divisions of the School are detailed in the following reports.

MERRILL K. BENNETT

Dean

ECONOMICS

The staff of the Department of Economics, teaching courses in Economics during the year 1946-47, included Bernard Francis Haley, Theodore Harding Boggs, Elmer Daniel Fagan, Eliot Jones, and Edward Stone Shaw, professors; Paul Lincoln Kleinsorge and Tibor Scitovsky, acting associate professors; Lorie Tarshis, assistant professor; Arthur Abraham Mandelbaum, Kenneth A. Johnson, acting assistant professors; Rendel Burdette Alldredge, William H. Hickman, Milton Lipton, Wytze Gorter, acting instructors; John Pagani, Lecturer during the winter and spring quarters. Albert H. Bowker, assistant professor of mathematical statistics, conducted one course in advanced statistics during the spring quarter. Fritz Machlup, professor of Economics at the University of Buffalo, was acting professor of economics during the summer quarter.

Karl Franz Bode, associate professor of economics, has been on leave of absence during the year, serving as Chief of the Policy and Research Section on Exports and Imports in the Military Government, Berlin, Germany.

Members of the staff of the Food Research Institute who were also members of the Department of Economics are Merrill K. Bennett, Karl Brandt, Joseph S. Davis, Vladimir P. Timoshenko, Vernon D. Wickizer, and Holbrook Working.

Several changes in the staff of the Department are in prospect for the academic year 1947-48. Professor Boggs has retired from active duty and becomes professor emeritus. Dr. Paul H. Norgren, now labor attache at the United States Embassy in Ottawa, has been appointed acting professor of economics, to offer instruction in the field of labor economics. Dr. Paul B. Simpson, of Cornell University, has been appointed acting assistant professor and will assume primary responsibility for advanced courses in economic statistics. Mr. John Pagani has been appointed acting assistant professor, with primary responsibility for instruction in economics-accountancy. Mr. Frank E. Norton, Jr., will be acting instructor, and will be concerned primarily with the introductory course in economics. Mr. Lipton and Mr. Gorter have resigned, the former to join the Institute of Industrial Relations at the University of California, and the latter to accept a position in the Department of Economics at the University

of California at Los Angeles. Professor Karl F. Bode was promoted from an associate professorship to the rank of professor.

In the Division of Sociology Richard Tracy LaPiere and Charles Nathan Reynolds, professors, Paul Wallin, assistant professor, and Donald Goodspeed Reuter, acting assistant professor, were on active teaching duty for the year. Mr. Carl M. Frisen was acting instructor during the spring quarter. Professor H. Warren Dunham, associate professor of sociology at Wayne University, was acting associate professor of sociology for the summer quarter. A more complete statement on the Division of Sociology is presented on page 315.

The following students served as teaching assistants in the elementary courses in accountancy, economics, and sociology: Homer Brown, George Brunn, Harold Buma, Philip Cartwright, Michael Eckstein, Melville Emerson, Carl Frisen, Adam Gifford, John Gurley, Ruth Harsch, Lafayette Harter, Karl Hass, Howard Jolly, Francis Mahon, Joan McDonough, Sidney Miller, Edward Morrison, and Rosemary Wallis. Eleven teaching assistantships were established in the autumn quarter, fifteen in the winter quarter, eleven in the spring quarter, and three in the summer quarter.

The enrollment in classes offered by the Department of Economics during the year 1946-47 is analyzed in the table below.

<u>Courses</u>		<u>Autumn</u>	<u>Winter</u>	<u>Spring</u>	<u>Summer</u>
Economics:	Total	1505	1805	1773	631
	Major students	277	287	332	126
	Graduate students	51	50	50	33
Sociology:	Total	384	355	376	176
	Major students	14	15	15	6
	Graduate students	9	11	9	6

The sharp recovery in enrollment since wartime and the increase, even in comparison with prewar figures, is apparent in the following figures for total enrollment in the Department of Economics.

<u>Year</u>	<u>Total Enrollment</u>	<u>Year</u>	<u>Total Enrollment</u>
1940-41	3,759	1943-44	1,665
1941-42	3,586	1944-45	1,811
1942-43	2,590	1945-46	4,647
		1946-47	7,005

The ratio of enrollment to instructing staff is extraordinarily high because enrollment has risen sharply, the return of staff members from their wartime duties has been delayed, and the staff has been reduced since prewar years by retirements and resignations. For the year 1946-47 enrollment per instructing member was 143 for the autumn quarter, 157 for the winter quarter, 136 for the spring quarter, and 126 for the summer quarter. For the three regular quarters of the year the enrollment averaged 145 students per quarter for each instructing member, compared with 114 in 1945-46, 69 in 1944-45, 46 in 1943-44, and 78 in the prewar period year 1940-41.

The Bachelor of Arts degree was awarded to 203 students in economics, 25 in economics-accountancy, and to 14 students in sociology. The Master of Arts degree was granted to 8 students in economics and 2 in sociology. Two students received the Ph.D. degree in economics.

Several members of the Department attended the annual meetings of the Pacific Coast Economics Association in Santa Barbara, December 30-31, 1946. Professor Haley led the discussion of two papers read before the meetings. Professor Jones served on the nominating committee of the Association. Professors Scitovsky and Tarshis read papers, to be published in the Proceedings of the Association. Professor Scitovsky's paper was entitled "The Concept of the Investment Potential," and Professor Tarshis' paper was on "The Propensity to Consume." Professor Fagan was elected to membership of the Association's Executive Board. Professor Shaw was chairman of the program committee for the Santa Barbara meetings.

Professor Haley addressed a special series of meetings on Western States commerce and international travel, sponsored by the Chamber of Commerce and other agencies in San Francisco in March 1947. The subject of the address was "Western States Opportunities in International Commerce." Mr. Shaw gave a lecture before the San Jose Adult Center Forum, in November 1946, on the topic, "The Nature of Man and His Resort to Violence: An Economic Interpretation."

Mr. Tarshis served as Lecturer in Economics at Williams College, Massachusetts, during the summer of 1947. Other members of the Department of Economics were associated with a variety of projects apart from university teaching. Professor Haley acted as consultant for the Department of State and represented that Department at meetings of the (West Coast) Foreign Trade Advisory Committee of the United States Department of Commerce. Professor Jones continued as Chairman of the Committee on Educational Activities of the Pacific Coast Transportation Advisory Board. Professor Fagan continued his membership of the Conference on Research in Fiscal Policy of the National Bureau of Economic Research. Professor Shaw acted as chairman of the Stanford Branch of the Universities-National Bureau Committee on research in economics. Both Professors Haley and Shaw accepted appointments as consulting editors, Professor Haley for W. H. Freeman Company and Professor Shaw for Richard D. Irwin, Inc. Professor Shaw served as editorial critic for two volumes published by Prentice-Hall, Inc., and for one chapter of the American Economic Association's Review of Economics. He is also engaged in a research project as consultant for the Douglas Aircraft Company.

The first products of postwar writing and research projects were beginning to appear in the academic year 1946-47. Professor Tarshis published his volume, Elements of Economics: An Introduction to the Theory of Price and Employment. Mr. Shaw's review-article on "Burns and Mitchell on Business Cycles," appeared in the Journal of Political Economy, August 1947. Professor Jones published two book reviews in the Annals of the American Academy of Political and Social Science; in the issue of November 1946, a review of T. C. Bigham's Transportation: Principles and Problems; in the issue of March 1947, a review of C. M. Wilson's Oil Across the World: The American Saga of Pipelines.

The coming academic year will yield a considerable flow of writing and research. Professor Haley is preparing the chapter on

Value and Distribution for the Americal Economic Association's volume, Review of Economics. Mr. Scitovsky has completed an article on "Competition and Monopoly" for Chambers Encyclopedia, and he expects to complete his volume on the theory of competition during the coming year. Mr. Mandelbaum has received a fellowship from the Hoover Institute, Slavic Studies Program, for research in postwar economic conditions in Poland. Mr. Shaw has completed two chapters for the Food Research Institute's study of commodity stockpiling as a device for economic stabilization. His volume on monetary analysis is scheduled for publication in the academic year 1948-49.

BERNARD FRANCIS HALEY
Executive Head

FOOD RESEARCH INSTITUTE

The active staff consisted of Merrill K. Bennett, executive director and professor of economic geography; Joseph S. Davis, director and professor of economic research; Karl Brandt, economist and professor of agricultural economics; Vladimir P. Timoshenko, economist and professor of commodity economics (on leave); Vernon D. Wickizer, economist and professor; Holbrook Working, economist and associate professor; Klaus E. Knorr, associate economist and associate professor (to March; on leave through February); Mirko Lamer (from February) and E. Louise Pepper, acting associate economists; William O. Jones, assistant economist; Rosamond H. Peirce, associate statistician; P. Stanley King, cartographer and editorial assistant; Maizie L. Erickson and Helen G. Winden, statistical assistants; Dorothy Adams, Jean P. Bus (from April 21), and Katherine M. Kennedy (to July 12), secretaries; Nora R. Carlson (to July 10), LaVern W. Cutler (from July 6), and Kathryn W. Krogh, secretarial assistants; Pat T. Dahlin (from February 17 to July 7), Mary D. Norton (to April), and Dorothy Wildermuth (from June 23), library assistants; Bessie Manuel, executive assistant; and Alice McCutchan, office assistant.

Alonzo E. Taylor, director emeritus, contributed to the work of the Institute by counsel and suggestions, increasingly since his return to Palo Alto.

Mr. Chih-yi Chang, of the Academia Sinica in China, held a Food Research Institute fellowship during the year, completing his Master's degree in the Department of Economics with a dissertation on "The Oasis Economy of Sinkiang."

At the close of the year a two-year grant of funds had been received from the Rockefeller Foundation in support of appointment of Mr. Bogdan Dodoff, who will join the staff early in 1947-48 to assist in work in the general field of fats and oils.

During the year Mr. Jones, Mr. Lamer, and Miss Pepper were added to the research staff, while Mr. Knorr resigned to accept appointment at Yale University.

Mr. Timoshenko was on leave of absence throughout the year, serving until May in Berlin as adviser to the Food and Agriculture Branch, Economic Division, U. S. Office of Military Government in Germany. From May to September he traveled in Western Europe in connection with the Institute's major project mentioned below, an

International History of Food and Agriculture in World War II. Mr. Brandt was on leave in April and May. He participated at Mont Pélérin, Switzerland, in a conference of social scientists organized by Professor F. A. Hayek, was an observer at the Bizonal Conference on Agricultural Policy at Northeim, Germany, and later traveled in Germany, France, and Belgium in connection with work upon the International History of Food and Agriculture. Mr. Bennett was on leave in Japan in the latter part of July and in August, serving as one of a group of six scientists chosen by the National Academy of Sciences at the request of the War Department to review with the Supreme Commander for the Allies in the Pacific and with the Japanese the democratization and development of science and technology in Japan.

Staff activities were absorbed in considerable degree by planning for the future, especially with reference to the International History of Food and Agriculture, and by an enlarged instructional program. Publications were therefore more limited than usual in number and importance, though at the end of the year accumulations foreshadowed a large output during 1947-48. Research output published or in press during 1946-47 totaled 18 items, as listed under "Publications of the Faculty." Mr. Davis' International Commodity Agreements: Hope, Illusion, or Menace? was published in January by the Committee on International Economic Policy in cooperation with the Carnegie Endowment for International Peace. Josef Rosen's Wartime Food Developments in Switzerland, edited by Mrs. Farnsworth and Mr. King, appeared in May as No. 9 of the Institute's series of War-Peace Pamphlets. Nearly ready for press as the year closed were Naum Jasny's important analysis of Socialized Russian Agriculture in the Interwar Period, and Mr. Brandt's Whaling and Whale Oil during and after World War II, to appear as War-Peace Pamphlet No. 10. Under Mr. Bennett's direction, a general appraisal of proposals for an international commodity-reserve system neared completion and may be ready for publication in 1948. To this study, carried on under grant of funds in 1944-45 from the Committee on Economic Stability and Benjamin Graham of New York City, Professor Edward S. Shaw of the Department of Economics at Stanford contributed heavily.

About 21 volumes are contemplated for the International History of Food and Agriculture in World War II, for which a five-year grant from the Rockefeller Foundation, totaling \$300,000, became available in 1946-47. Six of these volumes are international commodity histories of wheat (Mrs. Farnsworth), fats and oilseeds (Brandt), livestock and feedstuffs (Brandt), sugar (Timoshenko), commercial fertilizers (Lamer), and coffee, tea, and cocoa (Wickizer), and will be undertaken by permanent and temporary staff at the Institute. Work upon them has begun.

The other 15 volumes, including a group of four bearing upon experiences in international organization and control and a group of 11 bearing upon regional and national food management, will with one exception be undertaken by qualified authors elsewhere. During the year arrangements were completed with the following authors: Mr. Eric Roll, The Combined Food Board and its Operations; Messrs. John Cassel and R. H. Allen, Food Relief in World War II: Plans and Performance; Mr. E. M. H. Lloyd, Wartime Food Developments in the Middle East; Mr. Harold B. Rowe and the Brookings Institution, Wartime Management of Food and Agriculture in the United States; Mr. R. J. Hammond,

Wartime Management of Food and Agriculture in the United Kingdom; Messrs. J. D. Bridgen, J. A. Crawford, and J. M. Tinley, Food and Agriculture in Australia, New Zealand, and South Africa, 1939-47; Messrs. Otto Schiller, Franz Ahlgrimm, Hans von der Decken, Kurt Häfner, and Arthur Hanau (under editorship of Mr. Brandt), German Management of Food and Agriculture in World War II; Mr. Victor B. Sullam, Food and Agriculture in Italy, 1939-47; Mr. Naum Jasny, Food and Agriculture in the USSR, 1939-47; and Messrs. Bruce Johnston, Yoshio Kusumi, and Masaburo Hosoda, Japanese Management of Food and Agriculture in World War II. At the Institute, Miss Pepper is undertaking the volume, Latin-American Agricultural Developments, 1939-47. Unassigned to authors as the year closed were volumes on the food imports of European neutrals, on Canada, on India, and on France.

Other research in progress within the Institute included studies of the world's potato economy, and relief and reconstruction and operations of the Allied Military Government in Western Europe (Brandt); consumption economics, and agricultural policy (Davis); flour consumption in the United States since 1930, and price relations among wheat, wheat flour, and corn (Jones and Working); palm oils, and food and agriculture in southeastern Asia (Wickizer); and orientation and method in scientific research generally and in economic research in particular, relations of theory to existing information on the functioning of futures markets, and the demand for food (Working). Mr. Working additionally cooperated with Dr. C. W. Schwerdt in study of the statistical significance of experimental results obtained in poliomyelitis investigations, with Dr. Walter Schilling on a paper on the fitting of compound Poisson distributions, and with Dr. Horace Gray in treatment of a research problem requiring analysis of variance.

The enlarged program of instruction involved six formal courses: two in the autumn quarter (Brandt, Davis); three in the winter quarter (Bennett, Brandt, Wickizer); and one in the spring quarter (Farnsworth). Additionally, Messrs. Bennett, Brandt, Davis, Wickizer, and Working, and Mrs. Farnsworth, each directed the work of advanced students. Special lectures on request of instructors elsewhere in the University were prepared by Messrs. Brandt and Wickizer.

Out-of-state travel, in addition to foreign travel in connection with extended leaves of absence, was as follows: Mr. Bennett twice (November, June) visited eastern cities mainly to arrange for cooperation on the International History of Food and Agriculture. Mr. Brandt, serving as discussion leader for the Council on Foreign Relations, visited Salt Lake City, Seattle, and Boise in December-January, delivering addresses to each local committee and participating in their discussions; he also addressed meetings in Baltimore, Chicago, Milwaukee, and Madison on current economic and political problems of Germany and Western Europe. In May, on returning from Europe, he participated in discussions at the Council on Foreign Relations in New York. Mr. Davis attended meetings of the Board of Directors, Social Science Research Council, in September at Princeton and March at New York; of the Agricultural Board, National Research Council, at Washington in October; of the American Economic Association and the American Statistical Association, at Atlantic City in January; and of the Executive Committee of the American Economic Association in January at Atlantic City and in March at Princeton. In April, at Dallas, he addressed the Biennial Convention of the American

Association of University Women. Mrs. Farnsworth attended the meeting of the American Farm Economics Association at Philadelphia in December, as discussant of a paper and participant in a round table discussion. Mr. Working attended meetings of the American Economic Association, American Statistical Association, and Econometric Society at Atlantic City in January, where he was chairman of a joint session of the two last-named societies and a member of the program committee of the Econometric Society. While in the East, in Washington, he delivered addresses at the Bureau of Ordnance, Navy Department, and the National Bureau of Standards, Department of Commerce.

Addresses by staff members to organizations within the state numbered about 16, in response to requests from Los Angeles, San Francisco, Sacramento, Stockton, Santa Cruz, Monterey, Berkeley, San Mateo, and Palo Alto and the University. Examples are Mr. Brandt's "How to End Our Quarrel with Russia in Germany," (Tuesday Evening Series, Stanford University, January); Mr. Davis' "The World Food Situation--Its Impact on United States Agriculture" (California County Secretaries and Committeemen of the Field Service Branch, U. S. Department of Agriculture, Santa Cruz, February); and Mrs. Farnsworth's "The Dynamics of Food" (Northern California Group, Women's Action Committee for Lasting Peace, San Francisco, April). The activities of staff members on committees and in conferences within the University and elsewhere, though significant and time-consuming, need not be specifically mentioned here.

Reorganization of the Institute's library, begun last year under the direction of Mrs. Farnsworth, continued during 1946-47 and was nearing completion as the year closed. Exchanges of publications, suspended during the war, have been reestablished. New exchanges have been arranged, and the library is now receiving a large number of official and unofficial publications from foreign countries. In addition, gifts of books, pamphlets, and periodicals totaled several hundred items.

MERRILL K. BENNETT
Executive Director

HISTORY

For the year, the staff in History consisted of the following: Edgar Eugene Robinson, Executive Head; Thomas Andrew Bailey, Carl Fremont Brand, Ralph Haswell Lutz, Maxwell Hicks Savelle, Professors; Claude A. Buss, Acting Professor; George Harmon Knoles, Charles Donald O'Malley, Merrill Ten Broeck Spalding, Associate Professors; Dayton Phillips, Rixford Kinney Snyder, Arthur Edward White, Assistant Professors; John J. Johnson, Acting Assistant Professor; Adolph Meisen and Livingstone Porter, Lecturers; Katherine Archibald, James Dilley, Matthew Bowman Evans, Dorothy Louise Thompson, Wayne S. Vucinich, Instructors; Robert Henry Billigmeier, Robert M. Langdon, Armin Rappaport, William Reed Stackel, Acting Instructors. Assistants included Mrs. Esther G. Ayers, John Louis Beatty, Edward Howard Brooks, Robert Paul Browder, Robert W. Coonrod, Cyclone Covey, Alexander DeConde, Robert M. Langdon, Arthur Leroy Littleworth, George Kilpatrick Tanham, James Madison Wood, Jr., and Richard L. Wysong. Mrs. McKee served as secretary in autumn quarter and summer quarter. In the

winter and spring, she was on leave of absence, and Mrs. Jean Freeman was acting secretary for that period. Mrs. Jean Reid served as assistant secretary throughout the year. Miss Theresa Gay continued as assistant in charge of the Reading Room in Western Civilization.

The faculty for the summer quarter consisted of Professors Brand, Lutz, and Robinson, visiting Professor Mazour, Assistant Professor Snyder, and Instructors Billigmeier, Meisen, and Rappaport.

As stated in the conclusion of the report for the year 1945-46, it was anticipated that two aspects of the work of the Department for the year 1946-47 would receive particular emphasis: the course in Western Civilization, required of all first-year students at Stanford, and the graduate work in all the fields of study offered by the Department. The greatly increased enrollment of both undergraduates and graduate students in History verified this anticipation.

Professor Knoles served as Chairman of the staff giving the course in Western Civilization for three quarters, autumn, winter, and spring, and Professor Snyder served during the summer quarter. The department committee in charge consisted of Professors Knoles, Chairman; Phillips, O'Malley, Spalding, White, and Snyder. The distribution of students was as follows:

	<u>History 10</u>	<u>History 11</u>	<u>History 12</u>
Autumn	898	193	174
Winter	181	913	185
Spring	--	200	888
Summer	170	--	93

The lectures were given by Thomas A. Bailey, Robert H. Billigmeier, James Dilley, Matthew B. Evans, Harold H. Fisher, Bernard F. Haley, George J. Hall, Hazel D. Hansen, Anatole G. Mazour, Adolph F. Meisen, Charles D. O'Malley, Lionel I. C. Pearson, Dayton Phillips, Livingstone Porter, Armin Rappaport, Edgar E. Robinson, Easton C. Rothwell, Maxwell H. Savelle, Rixford K. Snyder, Merrill T. Spalding, and Edward A. White. The teaching of this course was done by the lecturers, instructors, and acting instructors listed above, augmented by Associate Professors Knoles, O'Malley, and Spalding, and Assistant Professors Snyder and White. Independent Study for the superior students continued.

The enrollment in lecture, reading, seminar, research, and graduate courses was as follows:

	<u>Autumn</u>	<u>Winter</u>	<u>Spring</u>	<u>Summer</u>
Introductory Lecture Courses:				
100. Foundations of European Civilization, 300-1300	54			
101. Renaissance, Reformation, and Counter-Reformation, 1300-1600		74		
102. Europe, 1600-1789	85			
103. Europe in the 19th Century		151		
104. Europe since 1900			152	60
108. England	148			
111. France			30	
112. Modern Russia	122			63
113. China	24			

	<u>Autumn</u>	<u>Winter</u>	<u>Spring</u>	<u>Summer</u>
Introductory Lecture Courses: (Cont'd)				
116. Japan		42		
117. Latin America	28			
118. South America since 1823		73		
120. American History to 1789	85			
121. American History 1789-1890		155		
122. American History since 1890			117	
127. History of Canada			64	
Advanced Lecture Courses:				
130. American Diplomatic History			220	
132. Westward Movement		24		
142. French Revolution and Napoleonic Era	12			
144. Modern Italy			29	
146. Balkans since 1800			33	
140. Transition from Medieval to Modern Times			20	
148. Germany since 1914		91		
150. World War I and its Aftermath		47		
153. Russia in Asia	1			
155. Colonial Mind		40		
158. English Constitutional History				49
159. Tudor England				19
160. Great Britain since 1760		74		
163. American Revolution	51			
165. History of American Democracy				69
166. The Pacific Ocean Area			59	
173. Mexico and the Caribbean			107	
178. Civilization in the U. S. (20th century)			32	
Directed Reading Courses:				
204. Directed Reading--Medieval History	5	4	4	1
206. Directed Reading--Modern European History	19	7	21	6
214. Directed Reading--England and British Empire	3	8	2	8
216. Directed Reading--United States History	7	6	11	5
218. Directed Reading--Latin American History	4	2	2	
220. Directed Reading--Far Eastern History	4	3	3	1

	<u>Autumn</u>	<u>Winter</u>	<u>Spring</u>	<u>Summer</u>
Introductory Seminar Courses:				
227. Medieval History		13		
230. Modern European History	14			
233. Balkan History		10		
236. British History	5			
239. American History	14			
243. American Colonial History		17		
244. Latin American History		6		
247. Far Eastern History			10	
238. California			10	
Senior Seminar Courses:				
253. Medieval History			3	
256. Modern Europe (France)		6		
257. Early Modern Europe			7	
258. Russia		10		
260. British History		4		
263. U. S. History	11			12
264. American Diplomatic History		12		
265. American Colonial History	4		20	
269. Latin America			6	
271. Far East	6			
Senior Research and Graduate Courses:				
278. Medieval History		1		
281. Modern European History	3			
285. Senior Research: England				1
300. Historiography	8			
301. American Historiography			7	
315. Modern and Contemporary Europe				9
330. Graduate Seminar--United States	8			4
360. Graduate Research--Medieval History		1		
365. Graduate Research--Modern Europe	5	7	10	3
370. Graduate Research--England and the British Empire	2	3		1
378. Graduate Research--American History	10	17	14	17
385. Graduate Research--Far Eastern History		1	1	
386. Graduate Seminar--Far East		7		

The teaching load of members of this Department has increased, not only as revealed in courses given, but also in guidance of independent students (in undergraduate classes) and in guidance of graduate students in theses for the Master's degree and in dissertations for the Doctorate. This situation will be improved with the return of members of the faculty to full service, and with the increases in faculty to deal with additional fields of history.

Independent Study continued to be offered as is shown in record in reading courses and in special groups in Western Civilization. Mrs. Mary Frances Westcott Gray, holding a Weter scholarship, carried on a program of Independent Study in the History of Social Reform in Britain and the United States and completed it by passing an oral examination by a committee of this Department. Frank Fish Walker, Jr., was given the Weter award for 1947-48, and Miss Margery Swett was granted a Weter scholarship for 1947-48.

The Colonial Dames prize in an essay contest, made possible by a gift from the Colonial Dames of America Resident in California, was won by a Lower Division student, Mr. Jay B. Rhodes, with the topic, "Samuel Adams, Father of Revolution." This contest, now in its twenty-seventh year, will be continued. The winners include a distinguished list of scholars. The recent acquisition of a rich collection of colonial newspapers will add to the interest in this field of study.

There were 122 graduate majors. Programs of study for the Doctorate were provided in the following fields: Far East, 2; Latin America, 1; Modern Europe, 15; British Empire, 5; United States, 24. Guidance was given also to 15 graduate students with programs providing minors in History. Programs of study for the Master's degree were distributed as follows: Far East, 5; Latin America, 1; Medieval Europe, 1; Modern Europe, 18; United States, 46.

There were 114 undergraduate majors in History.

It should be noted that Professors Lutz and Fisher have also offered courses in the Hoover Research Institute, and that Professor Lutz and Professor Robinson have been named Councillors of the Hoover War Library. Throughout the year, Professor Lutz was Dean of Graduate Study.

The program of research of members of the faculty which was seriously interrupted by various activities of the war years has been resumed. Indeed, in many cases it was continued, although curtailed and modified by contemporary events. Resumption of publication of research studies has already begun, and there is promise of increased productivity in the programs of the Department members actively under way.

Professor Savelle's studies have been comparatively uninterrupted and have resulted in his book, The Seeds of Liberty. Professor Bailey has completed his study of American public opinion which is to be published in the autumn. Professor Brand is at work upon a comprehensive study of "British Labour and British Foreign Policy, 1919-1939"; Professor Buss is actively at work upon "The Effects of Japanese Policy and Activities in East Asia." Professors Knoles, O'Malley, Mazour, Vucinich, and White are actively continuing studies already well advanced in their several fields of special competence. Dr. Katherine Archibald published, through the University of California Press, her study of Wartime Shipyards. Professor Robinson published, through the Stanford University Press, his volume on They Voted for Roosevelt. A full list of the publications and the research work of members of the Department during the past year appears elsewhere in the President's Report.

The following items of information will illustrate the activities of the faculty in public service outside the University. At the annual Institute on Foreign Relations held at Cheney, Washington, Professor Savelle spoke on "The Educator and American Foreign Policy"; Professor

Brand spoke in San Francisco before the Exploratory Committee on Foreign Relations on "The British Position in the Middle East"; Professor Buss in the course of the year gave thirty public lectures dealing with problems of the Far East; Professor Robinson gave the annual Literature Address at the dinner meeting of the Commonwealth Club of California on "The First Hundred Years." Professor Knoles gave the spring convocation address on "The Mid-century Scholar" at the College of the Pacific at Stockton in June.

Members of the faculty have been active in the affairs of the historical associations. Professor Savelle served during the year as Chairman of the important Committee on Nominations of the American Historical Association. Professor Lutz continued to serve as a member of the Council of the American Historical Association, and both he and Professor Savelle, as well as Professors Phillips and Bailey and Mr. Rappaport, attended the Association meetings in New York in December. Professors Bailey and Savelle were on the program. Professor Knoles was Chairman of the Program Committee of the Pacific Coast Branch of the American Historical Association. Messrs. White, Johnson, Phillips, and Porter read papers at this meeting, held at Claremont College. Professor Robinson addressed the dinner meeting on "What Has Happened to American History?" He and Professor Knoles attended the meetings of the Mississippi Valley Historical Association held at Columbus, Ohio, in April, and Professor Knoles read a paper on "The War in the Pacific: A Survey of its Literature."

Professor Lutz attended the Institute of World Affairs at Riverside in December and conducted a round table on "The Reorganization of Germany by the Allied Powers." He attended the meetings of the Executive Council of the American Association of University Professors at Boston in February. He has continued to serve as Director of the Belgian-American Educational Foundation and as a member of the Editorial Board of the Journal of Central European Affairs.

Professor Knoles served as visiting professor in American history at the University of California at Los Angeles in the summer session. Professor Savelle was a member of the summer session faculty of Columbia University. Professor Phillips spent a portion of the summer in study at Cornell University. Dr. Thompson spent the summer in study at the University of Prague in Czechoslovakia. Professor Bailey spent the greater part of the summer as a member of a group of unofficial observers, traveling in Europe under the auspices of the War Department and, upon his return, will lecture at the National War College in Washington. Professor Buss lectured at the War College in Washington during the summer and will attend a meeting of the Institute of Pacific Relations in London in September.

The Institute of American History, established in 1943, has continued its program of work with the teachers of American history in California. The study of the subject matter of American history in the universities and colleges of the United States has been completed and the findings are to be published in the early autumn. Miss Lisette Fast has continued research secretary of the Institute.

The Borel Collection on California History has made minor acquisitions during the year. An increasing number of scholars have come to use the manuscript materials. Materials on the life of James Marshall, gathered in California and Nevada and in eastern states, are to be deposited in the collection. Professor Robinson, who has served for many years as administrator of the collection, spoke before the

annual meeting of the California Historical Society in San Francisco in January of the Borel manuscripts and of the publications that have been made possible up to this time.

An award, sponsored by the California Historical Society, was made in June to Miss Etta Lucile Smith, the History major of highest scholastic standing in the graduating class in June. The Cory scholarship in History was held during the year by Miss Rose Mary MacPhee.

Members of the department faculty have given the usual service to the university committees, and this is noted elsewhere in the President's Report.

At commencement, twenty-nine students were awarded the A. B. degree; nineteen students received the degree of Master of Arts, and four the degree of Doctor of Philosophy.

As noted in the report of last year, Professor Fisher has withdrawn from teaching in the History Department because of his heavy administrative duties elsewhere. In his direction of the School of Naval Administrators he has drawn upon the service of members of this Department. Professor Buss gave twenty lectures in this school program.

During the year Professor Arthur Bestor was on leave, serving as lecturer at the University of Wisconsin and during the summer quarter as fellow at the Newberry Library in Chicago. He resigned at the close of the current academic year to accept appointment as Associate Professor at the University of Illinois. Dr. Matthew Evans closes his service as instructor in Western Civilization and goes to the University of Denver as Assistant Professor in History. An indefatigable worker and a scholar of unusual erudition, Mr. Evans has developed new teaching techniques, particularly in the work in Independent Study, and these have brought most satisfactory results for superior students. Associate Professor Merrill Spalding resigned at the close of the winter quarter to enter private business. He plans to continue his research in the Hoover Library. The students of Russian history will greatly miss his inspiring outlook and his painstaking guidance. Professor Max Savelle has resigned and goes at the opening of the autumn quarter to the University of Washington. Since his coming to Stanford from Columbia University in 1932 as Assistant Professor of History, Dr. Savelle has been one of the most valuable members of the Department. Particularly was this true in the development of the course in Western Civilization, and he was long Chairman of the departmental committee. His own field of study, Colonial History, has been greatly developed in the years of his membership in the Department.

Plans for the year 1947-48 include the resumption of work that has been discontinued during the years 1944-47, and also the addition of work—some of it long in contemplation and some of it entirely new and designed to meet the needs of the present group of graduate students. With the autumn quarter, Dr. Davis Harris resumes his work in the Department and will specialize in the field of German history. Dr. Anatole G. Mazour comes to us from the University of Nevada and will offer work in Russian history. Dr. Knoles has been released from the direction and teaching of Western Civilization and will offer courses in American social history. Dr. Rixford Snyder has been moved from the work in Western Civilization to develop courses in the history of the British Empire. Dr. William C. Bark will come to us from the

University of Chicago to take direction of the course in Western Civilization and to offer work in the early Middle Ages. Dr. Edward White has been released from Western Civilization for the coming year to offer work in American colonial history and the history of California. Dr. Vucinich has been released from the work in Western Civilization and will give his time to the development of courses in the Near East. Dr. Arthur Wright, who has recently taken the doctorate at Harvard, comes to Stanford to offer work in the history of China and of Japan. To the staff in Western Civilization will be added Dr. James Stone, who has taken his doctorate at Yale, Mr. Marshall Dill of Harvard University, Mr. Wilbur Jacobs of the University of California at Los Angeles, and Messrs. Raymond Muse and William Steckel of Stanford University. These men, together with the present members of the staff who continue, will provide a staff of ten devoting all teaching time to Western Civilization. In considering this arrangement of work of the Department and of the enlargement of the program of offerings, it is to be noted as well that in the previous year Professor Buss in the field of the Far East, Professor Johnson in the field of Latin America, and Professor O'Malley in the Modern European field were appointed members of the faculty in History. With this augmented staff and with the enlarged program of study, it is expected that it will be possible to meet the needs of the increasing number of graduate students who are majoring in History.

EDGAR EUGENE ROBINSON

Margaret Byrne Professor of American History
and Executive Head

JOURNALISM

The staff of the Division of Journalism consisted of Chilton R. Rush, professor; Douglass W. Miller, acting professor (summer); Clifford F. Weigle, associate professor; Miles W. Kresge, Jr. (autumn), Thomas M. Newell, and Albert G. Pickerell (winter and spring), instructors; Edward J. Demson (spring) and Raymond D. Lawrence (spring), lecturers. Mr. Kresge died on October 29.

Class enrollment, exclusive of practice, research, and thesis courses, was 839--an increase of 99 per cent over the previous year and 105 per cent over the 1941-42 year.

The master's degree was awarded to fifteen candidates and the bachelor of arts degree was conferred on thirty-five--by far the largest number ever to receive degrees. During the year the Division had thirty-seven graduate students and 113 undergraduates as majors, representing an increase of 168 per cent over the prewar five-year average.

The Division sponsored the twenty-third annual convention of the Central California Scholastic Press Association and the ninth annual Midyear Editors' Conference of the California Newspaper Publishers Association.

The demand for Stanford graduates by newspaper and press associations continued to exceed the number available. Seven of the graduates were employed by press associations; one by National Broadcasting Company; one by Sunset magazine; one by McCann-Erickson Company, advertising agency; one by San Francisco State College; one by the Pacific

Coast Intercollegiate Athletic Conference; and the others by Pacific Coast newspapers.

Mr. Bush conducted his third series of readership studies in western states, which was begun in 1945; conducted readership studies for the Portland Oregonian and the Redwood City Tribune; and established a sample census for the Hawaiian Islands.

Mr. Bush was a member of the Executive Committee of the Academic Council and of the Executive Committee of the School of Social Sciences. He served as a member of the National Committee on Reorganization of Structure of Sigma Delta Chi, professional journalism society. He addressed the Northwest Electric Light and Power Association in Seattle, the California section of the National Association of Journalism Advisers in Bakersfield, and the Redwood City Kiwanis Club.

Mr. Weigle conducted a survey for the Salt Lake City Tribune and Telegram. He directed the convention of the Central California Scholastic Press Association. He served as a member of the Lower Division Advisers' Panel, the Standing Curriculum Committee of the School of Social Sciences, and the University Radio Committee. He addressed the California section of the National Association of Journalism Advisers at Bakersfield and the Midyear Editors' Conference.

Mr. Newell addressed the Midyear Editors' Conference and the Central California Scholastic Press Association.

The Division received an initial gift of \$1,000 from Mr. and Mrs. Frank J. Taylor to establish the Ellen S. Taylor Memorial Library Fund. The fund is in memory of Mr. Taylor's mother and is being used for the purchase of books in the field of journalism. A new reading room on the second floor of the Press building will house the collection. The Division also received approximately \$300 for library purposes, the sums being contributed in memory of Miles W. Kresge, Jr., '43, and Harold M. Shafer, Jr., '42. Miscellaneous gifts of approximately \$150 were also received.

Douglass M. Miller, of Syracuse University, was appointed acting professor of Journalism for the 1947-48 academic year in place of Professor Weigle, who will be on sabbatical leave of absence.

CHILTON R. BUSH
Executive Head

POLITICAL SCIENCE

The staff for the year consisted of Edwin A. Cottrell, Graham Stuart, Thomas S. Barclay, Philip W. Buck, and Charles Fairman, professors; Alpheus Thomas Mason and James K. Pollock, visiting professors for the summer quarter; Robert H. Connery, associate professor; James T. Watkins, IV, and Arnaud B. Leavelle, assistant professors; Dr. Tungchi Lin, lecturer in Humanities, who offered a course in political science; Alan Baldwin, Theodore A. Chester, Lawrence E. Grannis, Janet M. Morris, Paul R. Murray, Polly Ray Ross, Robert W. Putnam, Ake Sandler, Ernest H. Sorotskin, Manfred C. Vernon, Robert F. Wilcox, Harold Grambs, Gloria E. Anderson, Kathleen Christian, Jerry Magner, and S. Grover Rich, assistants in instruction. Miss Florence T. Stevens served as secretary, and Mrs. Frances Koller, from October to March 15, Mrs. Ruth Putnam, from March 15 to June 30, and Miss Nancy Rountree, during the summer quarter, served as assistant secretaries.

This enlarged staff was required for the greatly increased

enrollment in the courses offered by the department. In the autumn quarter there were 1122 registrants in political science courses, in the winter quarter 951, in the spring quarter 910, and in the summer quarter 320. The total for the year was 3303, an increase of nearly 70 per cent above the preceding academic year. The numbers of students declaring a major in political science were as follows:

Autumn quarter, 157 - consisting of 110 undergraduate and
47 graduate students;
Winter quarter, 152 - consisting of 116 undergraduate and
36 graduate students;
Spring quarter, 174 - consisting of 124 undergraduate and
50 graduate students;
Summer quarter, 57 - consisting of 29 undergraduate and
28 graduate students.

During the autumn, winter, and spring quarters two students were granted the degree of Doctor of Philosophy, twelve were granted the degree of Master of Arts, and 103 the degree of Bachelor of Arts. Of the latter, four received the degree with great distinction, and six with distinction, and seven were elected to Phi Beta Kappa Society.

Mr. Fairman continued as the Executive Head for the autumn and winter quarters. During his absence on sabbatical leave, spring and summer quarters, Mr. Buck acted in his stead.

The end of the winter quarter marked the close of Mr. Cottrell's active teaching at Stanford, when he retired and received emeritus status. He came to the department in the autumn of 1919, became Executive Head in 1927 and served in that capacity until 1945. He also served as Chairman and as Dean of the School of Social Sciences from 1930 until 1945. During this time he was a member of many University committees, including the Executive Committee of the Academic Council, and the Advisory Board. He was continuously active in public affairs in the State of California, a member of the Commonwealth Club, served as a consultant on the framing of city charters, and acted in various expert capacities for agencies of the State government.

His teaching effectiveness is embodied in the persons of his many students, of whom a great number are now officials of local and state governments, research workers in many governmental research bureaus, and members of college faculties performing services comparable to those which he has rendered in California and the western states and cities.

He was on leave during the spring and summer quarters of this year. He continued as a member of the Board of Public Works and as Chairman of the Personnel Board of the City of Palo Alto. He also continued as a member of the Committee on Administrative Personnel of the United States Civil Service Commission of the 12th District and of the Federal Personnel Council. In September, he retired as President of the Western Governmental Research Association but continues to serve on its Executive Committee. He has acted as Consultant for the Coro Foundation of San Francisco in its internship program at the San Francisco City and County Building. He has been a consultant for new charters for Eureka, El Centro, and San Luis Obispo, and has spoken to various groups in these cities on the council-manager plan of government, as well as before the annual meeting of the City Managers' Section of the

League of California Municipalities and the California Planners Conference.

His colleagues all take pleasure in the fact that his active career will continue after retirement from teaching at Stanford. He has been appointed a trustee of the John R. Haynes and Dora Haynes Foundation of Los Angeles, and will act as consultant for local government for the foundation. In this capacity he will continue to carry on research, and influence young men and women in problems of government and the public service.

Mr. Stuart was on duty autumn, winter, and spring quarters, and has spent the summer in Washington, D.C., working on an assignment from the State Department to write a history of the department. In December 1946, he was Chairman of a round table at the meeting of the American Political Science Association in Cleveland, Ohio, and in the same month he served as Director of the Institute of World Affairs at Riverside, California. He attended the meeting of the advisory committee of the American Institute of France in New York in March 1947. He addressed forums in South Pasadena and San Luis Obispo, spoke to the Commonwealth Club, and to the Student Forum at Stanford. He published articles in the American Year Book, the Year Book of World Affairs, and Current History. At Stanford he served as a member of the committee of the School of Social Sciences on the International Relations Program, and on the special committees of the faculty on Latin-American Studies, and on Who's Who in Latin America.

Mr. Barclay was in residence during the autumn, spring, and summer quarters. He spent the winter quarter engaged in research work in the Library of Congress, and in various libraries in St. Louis, Missouri, for the purpose of collecting additional manuscript and other materials in connection with the two studies he is completing. He published several reviews in the United States Quarterly Book List, and prepared additional reviews for the professional journals. He was invited to write two articles for the forthcoming Collier's Encyclopedia. In December he attended the annual meeting of the American Political Science Association in Cleveland. He read a paper entitled, "The Double-Filing System and Party Responsibility in California," at one of the two sessions. He also continued to serve as a member of the Committee on Election Statistics of the Association, and was appointed to the Committee on Political Parties recently established by the President of the Association.

At Stanford he served as the secretary of the Stanford Chapter of the Phi Beta Kappa Society, and represented the chapter at the Triennial meeting of the Council, held in September, 1947, at Williamsburg, Virginia. He was a member of the Lower Division Committee, and also served as an advisor of lower division students.

Mr. Buck taught during the autumn, winter, spring, and summer quarters, acting as Executive Head of the department for the latter two quarters. He was chairman of the Committee on the International Relations Program of the School of Social Sciences, and also served as Chairman of the Stanford Institutional Committee on the Rhodes Scholarships. He was president of the Men's Faculty Club, and spoke on the programs of the Stanford Alumni Conferences at Portland, Seattle, Los Angeles, and Stanford. In June of 1947 the book, The Governments of Foreign Powers, which he had written in collaboration with John W. Masland, was published.

He delivered two series of lectures for the American Institute of Banking in San Francisco, and spoke for adult education forums in San Jose, Napa, and Los Gatos, for the Commonwealth Club, the San Francisco Center, the State Convention of Exchange Clubs, and to various groups in the San Francisco Bay Area.

Mr. Fairman taught during the autumn and winter quarters, and served as Executive Head of the department. He was chairman of the Committee on Graduation, member of the Graduate Study Committee, and chairman of its sub-committee on the distributed minor. He was on sabbatical leave in the spring and summer quarters, and travelled through the South, East, and Middle West, collecting materials for a book on Mr. Justice Bradley and the Supreme Court, 1870-1890. He was given a grant-in-aid from the Social Science Research Council to assist in collecting this material.

He attended the meeting of the Political Science Association at Cleveland, Ohio, and was chairman of the round table on the Trial of War Crimes. He was elected third vice-president of the Association, and was made a member of the Committee on Research and of the Committee on Judicial Organization and Administration. He attended the annual meeting of the American Society of International Law at Washington, D.C., April 24-26, and read a paper on "Military Occupation and the Development of International Law." He continues as a member of the Executive Council of the Society, and assisted in the organization of its first Pacific Coast regional meeting in December 1946. He spoke before the Commonwealth Club on "Military Occupation: Problems and Policies."

Mr. Connery was on duty autumn, winter, and spring quarters, and as part of the teaching program in the course in American government took a party of students to Sacramento, where they visited government administrative agencies, and were extended the privileges of the Senate floor. During the summer quarter he taught in the Department of Public Law and Government of Columbia University.

He attended the Political Science Association meeting in Cleveland, Ohio, and was elected to the Executive Council of the Association. During the past year he has acted as a Research Consultant for the Secretary of the Navy in regard to the preparation of an extended report on the Navy's participation in the industrial mobilization.

Mr. Leavelle was in residence autumn, winter, and spring quarters. His time was very fully occupied in reestablishing both undergraduate and graduate courses in the field of political theory, which had been maintained on a minimum basis during the war years. He spoke to the Palo Alto Chapter of the Daughters of the American Revolution on the subject, "Old Principles and New Tendencies in American Democracy," and to the Salinas Adult Forum on the subject, "Americanism."

Mr. Watkins taught during the autumn, winter, and spring quarters. He served as chairman of a round table on China at the Institute of World Affairs held at Riverside, California, December 1946. He spoke to the Stanford Voccom Group, to the Association of American University Women in Palo Alto, and to the Chinese-American Friendship Group at Stanford. He received a grant from Columbia University to assist in the editing of a work on military government in the Ryukus, which he is carrying forward in collaboration with other scholars.

Increased enrollment in the University, and increased student interest in national and international affairs had the effect of greatly enlarging the activities of the department during the academic

year. While many projects for improving the program of instruction are being planned, the members of the department take satisfaction in having accomplished a very difficult task during this year.

PHILIP W. BUCK
Acting Executive Head

PSYCHOLOGY

The faculty consisted of Ernest Ropiequet Hilgard, Paul Randolph Farnsworth, John Marshall Stalnaker, Calvin Perry Stone, and Edward K. Strong, Jr., professors; Maud Merrill James, Quinn McNemar, John Metts Willets, associate professors; Tamara Dembo, Ann Magaret (summer quarter), Ralph K. White (autumn quarter), acting associate professors; Donald Wayne Taylor, assistant professor; Howard Francis Hunt, acting assistant professor; Vee Jane Alvarez-Tostado, acting instructor; Katherine Preston Bradway (spring quarter), Lois Meek Stolz, (winter quarter), lecturers.

The number of students registered in psychology courses was 933 in autumn quarter, 1164 in winter quarter, 1009 in spring quarter, and 373 in summer quarter. During the autumn quarter there were 93 undergraduate majors and 66 graduate majors; in the winter quarter 85 undergraduate, 60 graduate; in the spring 81 undergraduate and 65 graduate; in the summer 22 undergraduate and 30 graduate majors.

At the annual commencement in June, 1947, the Bachelor's degree was awarded to 47 students who had majored in Psychology. Eighteen students received their Master's degree and four received the Ph.D. degree.

The office of the department, and most of the faculty offices, were moved to new quarters on the first and third floors in the Cubberley Education Building. Construction was begun on new laboratory space in the basement of that building. Thanks to the generosity of Mrs. Cubberley, an additional office and new lavatory facilities were provided.

Mr. Terman (emeritus) received funds during the year for the extension of his studies of exceptionally gifted children.

Mr. Hilgard continued his research investigations in the field of learning, receiving a grant from the American Philosophical Society for this purpose. He served as chairman of the Policy and Planning Board of the American Psychological Association, and as representative of the Association to the National Research Council. He taught at the University of Washington during the summer session of 1947.

During the year Mr. Farnsworth engaged in further researches in the field of the psychology of music. These and earlier studies furnished a portion of the material for a forthcoming book, Musical Taste: Its Measurement and Cultural Nature. His aesthetic interests were also reflected in papers on "Musical Eminence" delivered before the American Psychological Association at Philadelphia and the American Society for Aesthetics at Chicago in September, in another paper entitled "Sacred Cows in the Psychology of Music" given before the Pacific Coast Division of the American Society for Aesthetics at Berkeley in May and in his service on the editorial boards of the Journal of Aesthetics and the Journal of Musicology and as president of and representative for the Division of Esthetics of the American

Psychological Association. Mr. Farnsworth continued as a member of the Executive Committee of Section I of the American Association for the Advancement of Science and of the General Committee of the Division of the Teaching of Psychology of the American Psychological Association. Locally, he served on the Advisory Board and the Committee on Graduate Study, Teacher Education, Lower Division, and Vocational Guidance. Four master's theses were completed under his guidance.

The researches of Mr. Stone during the year dealt chiefly with the effects of electro-convulsive shocks on drive, emotions, and learning performances in rats. His chief committee work in the department consisted of departmental advising of graduate students and direction or assistance in the supervision of three doctoral and two master's theses completed during the year. Other committee work consisted of chairmanship of the Graduate Study Committee of the School of Social Sciences, member of the Graduate Study Committee during the spring quarter, member of Committee of Pre-medical Advisors, and representative for the Division of Physiological Psychology of the American Psychological Association. He is the Editor of the Journal of Comparative and Physiological Psychology. On invitation he attended a one-week conference on Comparative and Social Psychology at the Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine, where he served as chairman of the Subcommittee on Learning and Instinctive Behavior. He presented papers at the Stanford Faculty Club, the American Psychological Association meetings, the Princeton Bicentennial Symposium, and the summer school of the University of Wisconsin, where he taught during the eight-weeks summer session.

Mr. Strong revised the Women's Vocational Interest Blank and the accompanying manual and occupational scales. His book on Vocational Interests of Men and Women went into its third printing. During the year he made talks before the Society of Industrial Engineers in Oakland and the 20-30 Club in San Jose. In December he attended a private conference on the selection of sales personnel conducted by the Klein Institute of New York City, and in June he attended the meeting of the Western Psychological Association in San Diego.

Mrs. James' research activities during 1946-47 have centered around the children's clinic and have been directed toward the development of clinical methods suitable for dealing with the problems presented. Special attention has been given to the development of a new projective technique and the use of play therapy. The further development of the scope and facilities of the clinical curriculum has been one of her major projects this year. In this program, which includes the development of the V. A. clinical facilities, Mrs. James' chief responsibility has been the children's clinic which has more than doubled its service and training opportunities. Mrs. James attended the meeting of the Western Psychological Association, of which she has been vice-president. The work of three candidates for the master's degree and three for the doctorate has been directed by Mrs. James. Two master's theses and one doctoral dissertation were completed during the year under her direction. Her book on Youth Delinquency, incorporating research done in the San Jose area, appeared late in the year.

Mr. McNemar completed the manuscript for a textbook covering the material in his elementary and advanced statistics courses. Publication of this is assured. In September he attended the Philadelphia meeting of the American Psychological Association, and during the

winter quarter, in addition to his regular courses, he gave an informal seminar on the analysis of variance. His recently published evaluation of Attitude-Opinion Methodology has attracted considerable attention.

Mr. Willits talked on the subject "Fire-Prevention in the Personnel Field" at the annual meeting of the Fire Underwriters' Association of the Pacific, Palace Hotel, San Francisco, March 10, 1947. This talk, on preventive measures in personnel management, is being published in the 1947 Proceedings of the Association. He was appointed Research Associate of the Psychological Corporation, Market Research Division, in March 1947. In that capacity he supervised the work of Stanford students on three consumer surveys in Palo Alto and several other towns in the vicinity. He conducted a vocational guidance session on vocational opportunities and requirements in the field of psychology in connection with a guidance program sponsored this spring by the local Kiwanis Club for the Palo Alto High School.

Mr. Taylor continued his exploratory work on the hypnotic transcendence of voluntary capacity. Together with Mr. Hilgard he began the preparation of an introductory textbook in psychology. He supervised four master's theses completed during the year. He served with Dr. Weymouth in physiology as co-chairman of two doctoral dissertations.

In addition to his regular teaching duties, Mr. Hunt has taken special responsibility for the clinical case conferences and practicum training at the Palo Alto Veterans Hospital for graduate students in clinical psychology. In addition to supervising the independent research of graduate students in this field, he has carried out research on the clinical validity of the Minnesota Multiphasic Personality Inventory and on the practical utility of the K correction included in that test. This research has been a cooperative enterprise in which interested graduate students have participated as part of their professional training. In connection with his responsibility for formulating and administering the Veterans Administration Training Program in Clinical Psychology, Mr. Hunt has served as a consultant in psychology to the Veterans Administration with duties related to facilitating and expediting both the clinical and training functions of that agency. He also made several speeches to outside organizations concerning this program. During the summer of 1947 Mr. Hunt was a research associate at the University of Michigan, serving on the staff of that university's research project on the selection of clinical psychologists.

Mrs. Alvarez-Tostado served primarily in relation to the training program in clinical psychology sponsored by the Veterans Administration.

Mrs. Stolz gave work in the winter quarter in child psychology and mental hygiene; Mrs. Bradway offered a course in Rorschach techniques during the winter quarter, and Miss Margaret offered course work in personality and clinical psychology during the summer quarter.

The project of Miss Dembo and her associates on the social psychological rehabilitation of the physically handicapped continued under the auspices of the Surgeon General of the War Department.

ERNEST R. HILGARD
Executive Head

SOCIOLOGY

The staff of the Division of Sociology on active duty in all or part of 1946-47 included Richard Tracy LaPiere and Charles Nathan Reynolds, professors; Paul Wallin, assistant professor; Donald Goodspeed Reuter, acting assistant professor; Carl Martin Frisen, acting instructor. H. Warren Dunham, associate professor of sociology at Wayne University, was acting associate professor for the summer quarter. Professor Dunham conducted courses in Urban Sociology and Juvenile Delinquency.

Mr. Paul Wallin was promoted from assistant professor to associate professor.

The division enrolled in its classes 1,291 students, as compared with 1,002 in 1945-46, 682 in 1944-45, 630 in 1943-44, and 547 in 1942-43. In the prewar year 1940-41 the division enrolled in its classes 977 students.

For the year 1946-47 enrollment per instructing member was 110 for the autumn quarter, 89 for the winter quarter, 107 for the spring quarter, and 88 for the summer quarter. For the three regular quarters of the year the enrollment averaged 102 students per quarter for each instructing member, compared with 142 for 1945-46, 99 in 1944-45, and 91 in the prewar year 1940-41.

The enrollment of major students was as follows: autumn quarter, graduates 9, undergraduates 14; winter quarter, graduates 11, undergraduates 15; spring quarter, graduates 9, undergraduates 15; summer quarter, graduates 6, undergraduates 6. The Bachelor of Arts degree was awarded to 14 students majoring in Sociology, the Master of Arts degree to 2 students.

Several members of the Division of Sociology attended professional meetings during the academic year. Professor LaPiere participated in the annual meetings of the American Sociological Society in Chicago, December 27-30, 1946, and of the Sociological Research Association, which were held concurrently in Chicago. He attended also the annual meetings of the Pacific Sociological Society at Agate Beach, Oregon, on May 16-17, 1947. He was elected president of the Society for the year 1947-48. Mr. Frisen, too, joined in the Society's meetings at Agate Beach. Professor Reynolds attended the National Conference of Social Work in San Francisco, April 18-19, 1947, and the Stanford Humanities-Anthropology Conference in Santa Barbara, May 16-17, 1947. Professor Reynolds read a paper before the Santa Clara County Institute on Human Relations, at its meeting in San Jose, November 1, 1946. The Institute conducted its sessions under the auspices of the National Conference of Christians and Jews. Mr. Reynolds also addressed the San Jose Adult Center Forum, in October 1946, on the subject of "The Nature of Man and His Resort to Violence: An Anthropological Interpretation."

Professor LaPiere served in the summer of 1947 as visiting professor of sociology at the University of Washington. He has continued his work as consulting editor for the McGraw-Hill Publications in Sociology. Mr. Wallin was appointed member of the Pacific Coast Committee on Community and Area Research, a committee established by the Social Science Research Council.

In the matter of publications, Professor LaPiere's volume, Sociology, was outstanding. It was published in 1946 by McGraw-Hill Book Company. Mr. LaPiere also published two reviews. He reviewed

for the American Journal of Sociology the volume by Gottschalk, Kluckhohn, and Angell on The Use of Personal Documents in History, Anthropology, and Sociology. His review for the American Sociological Review was on Strode's Social Insight Through Short Stories.

Professor Wallin is completing a volume in collaboration with Professor E. W. Burgess of the University of Chicago, on Engagement and Marriage. Publication is scheduled by Harcourt Brace and Company for 1948. Mr. Wallin has initiated two research projects that he expects to complete within the year ahead. The first is a study of differential social control over remarriage in large and small communities. The second has to do with the relationship between the ego-involvement of subjects and the adequacy of data collected in various types of sociological and psychological investigations. Professor Reynolds will continue his research on internal migration and the growth and distribution of population in California. Professor La Piere is progressing on his study of social controls.

BERNARD FRANCIS HALEY
Executive Head

APPENDIX III

COMMITTEE ON GRADUATE STUDY

During the academic year 1946-47 the committee was composed of the following members: Professor Frederick Anderson, Harold M. Bacon, A. John Bartky, Thomas A. Bailey, Charles E. Clifton, Charles H. Danforth, Paul R. Farnsworth, Raymond D. Harriman, Lydik S. Jacobsen, George E. Osborne, George S. Parks, Hugh H. Skilling, Victor C. Twitty, Douglas M. Whitaker, John Stalnaker, Secretary, and Ralph H. Lutz, Chairman, Dean of Graduate Study.

The standing special committees of the Graduate Study Committee were as follows: Substitute Program of work for one of the foreign languages: Professors R. D. Harriman, Chairman, C. H. Danforth, Frederick Anderson, and Harold M. Bacon. Thesis Titles: Professors Thomas A. Bailey, Chairman, Frederick Anderson, Douglas Whitaker, George S. Parks, Lydik S. Jacobsen, and A. John Bartky. Waiving of Minors: Professors Charles E. Clifton, Chairman, Harold M. Bacon, Victor C. Twitty, Paul R. Farnsworth. Distributed Minors: Professors Charles Fairman, Chairman, Hugh H. Skilling, George E. Osborne, George S. Parks. University Division: Professors L. S. Jacobsen, John Stalnaker, Ralph H. Lutz.

Advanced degrees were conferred during the year including 269 Master of Arts, 146 Master of Science 15 Engineers, 164 Master of Business Administration, 48 Bachelors of Laws, 2 Master of Laws, 21 Doctor of Education, 61 Doctor of Medicine, 33 Doctor of Philosophy.

Upon the recommendation of the sub-committee on fellowships, Hugh H. Skilling, Chairman, Charles A. Fairman, George S. Parks and Victor C. Twitty, the following fellowships administered by the Committee on Graduate Study were awarded for the academic year: Royall Victor Fellowships, Robert T. Bean, Robert L. Darneal, Leola S. Horowitz, Julius Roth and Edward M. Sweeney. Abraham Rosenberg Research Fellowships: Byron R. Bryant, Daniel R. Miller. John M. Switzer Fellowships, Charles D. Heaton, Richard F. Post, Charles A. Reynolds. Frederick P. Whitaker Fellowship, Donald M. Balcom. Academy of Time Fellowship, Kees Bol. George Loomis Fellowship in American Literature, Gloria T. Chasson.

In accordance with the association agreement, this list was reported to the American Association of University members in a letter dated April 15, 1947.

The following professors were designated by the committee as examiners of candidates for the

Ph.D. degree who planned to take foreign language examinations in French, German or Spanish: French, Professors John C. Almack, James P. Baumberger, Felix Bloch, W. V. Kaulfers, F. O. Koenig, A. A. Mandelbaum, C. vanNiel, R. A. Ogg, J.J. Johnson, S. A. Smith, W. L. Schwartz, and J.B. Rael. German: Professors J. C. Almack, Felix Bloch, Karl Brandt, F.O. Koenig, Charles O'Malley, R. A. Ogg, B. Q. Morgan, E. W. Schultz, T. Scitovsky and C. vanNiel. Spanish: Professors J.J. Johnson, J.B. Rael.

During the academic year the committee recommended the following legislation which was adopted by the Academic Council; That the School of Physical Sciences be empowered to confer the degree of Master of Science upon qualified candidates. That the Faculty of the School of Mineral Sciences be permitted to award the Master of Science degree to students completing the required curricula of the School of Mineral Sciences. That the School of Education be allowed to substitute a year of successful teaching under staff supervision, plus a semester, as an alternative to the thesis now required for the Master of Arts degree in Education. That the present academic ruling concerning the final date of the primary oral examination be changed to read "This examination shall be approximately three hours long and shall be held not later than the fourth week of the last quarter of candidacy."

The following members of the Graduate Study Committee were elected by the Academic Council in May 1947 for a two-year term commencing September 1, 1947: Richard F. Jones for Group I, Charles E. Clifton for Group II, A. C. Giese for Group III, Harold M. Bacon for Group IV, George E. Osborne for Group V, Ralph H. Lutz for Group VI.

The Chairman served until October 1946 as a member of the Committee of Graduate Deans of the Association of American Universities which is concerned with the classification of universities and colleges. He was also designated by President Tresidder as a representative of the University at the 43th annual conference of the Association of American Universities held at Princeton University October 22-24, 1946.

PATENT

Members for 1946-47 were: Alf E. Brandin, Paul J. Hanzlik, Marion R. Kirkwood, George S. Parks (Chairman), and Hugh H. Skilling.

The Committee held no formal meetings, as no invention was reported by a Stanford faculty member, or other employee, during the first eleven months of the academic year. However, during May 1947 the Committee was consulted by the President's Office regarding a proposed contract between Parke, Davis and Company and Stanford University, relative to the subsidizing of some of Professor Mosher's research work, and certain recommendations were accordingly made after a series of conferences between the Chairman and available committee members.

GEORGE S. PARKS
Chairman

COMMITTEE ON PUBLIC EXERCISES

The following members served on the Committee on Public Exercises during the 1946-47 academic year: John M. Stalnaker (chairman), William H. Cowley, William Crosten, Hubert C. Heffner, Paul H. Kirkpatrick, George F. Sensabaugh, Hugh H. Skilling, Rixford K. Snyder, F. Cowles Strickland, Victor C. Twitty. All the members of the Committee were on active duty during Autumn and Winter Quarters; Mr. Snyder and Mr. Strickland were absent on leave during Spring Quarter, although both served on the Commencement Committee; Mr. Sensabaugh and Mr. Crosten were absent on leave during Summer Quarter.

On May 31, Mrs. Yvonne Harley Dane resigned as Secretary to the Committee on Public Exercises after three and one half years of able and devoted service. She was replaced by Mrs. Marylou Patton Brune, who officially took over the duties of the position on May 26.

Committee activities were carried on during the four quarters of the year with the assistance of the following subcommittees, which were appointed at various times during the year to carry out specific projects: Tuesday Evening Series Program Committee: Messrs. Hubert C. Heffner (chairman), William H. Cowley, Victor C. Twitty, William Crosten; Founders' Day Committee: Messrs. Norman Philbrick (chairman), William Crosten, Chaplain George J. Hall; Charles Weidman Dance Program Committee: Messrs. George F. Sensabaugh (chairman), Frederic O. Glover, Hubert C. Heffner, Mrs. Miriam Lidster; Revival Film Series Committee: Messrs. John W. Dodds (chairman), George F. Sensabaugh, Ray Faulkner, Alexander Nicholas Vardac; Commencement Committee: Messrs. George F. Sensabaugh (chairman), F. Cowles Strickland, William Crosten, Rixford K. Snyder, Frederic O. Glover, Thomas P. Carpenter, Paul Holden, Paul Kirkpatrick, Skipwith Athey; Commencement and Baccalaureate Speakers Committee: Messrs. William H. Cowley (chairman), Hubert C. Heffner, Paul Kirkpatrick; Baccalaureate Committee: Messrs. William Crosten (chairman), Chaplain George J. Hall, F. Cowles Strickland; Outdoor Luncheon and Program Committee: Messrs. Virgil Anderson (chairman), Clarkson Ogelsby, Mack Evans, Alexander Nicholas Vardac, Paul Kirkpatrick, Miss Christine Ricker; Outdoor Opera Committee: Messrs. Hubert C. Heffner (chairman), Herbert Jan Poppe, F. Cowles Strickland, James H. McCulloch. (The subcommittee voted against presenting the opera.)

During the four quarters of the year, 40 issues of the Weekly Stanford University Calendar were published. Because of an increase in the mailing list, the number of calendars printed per issue was increased, beginning in January, from 1,200 to 1,300. Distribution of the weekly calendar was as follows: 875 to campus offices and departments; 62 to campus living groups and all campus bulletin boards; 217 to subscribers; 96 to complimentary subscriptions; 47 to the Committee on Public Exercises for office use.

The Committee, in behalf of the University, entertained a total of 23 speakers and artists, who appeared on the Tuesday Evening Series programs during the year. Other guests of the University were entertained by the Committee as follows: November 7, dinner in the Garden Room of the Union Dining Hall honoring Dr. Margaret Mead prior to her lecture in Cubberley Hall, Education Building, on "The Patterns of Sex Differences in Contemporary United States," auspices Committee on Public Exercises, joint sponsorship University of California and Stanford University Medical Schools; April 2, dinner in the Union

Dining Hall honoring Mrs. Katherine Hait Dorlinger prior to her lecture in Cubberley Hall, Education Building, on "Fine Crystal and American Achievement," auspices Committee on Public Exercises.

In addition to the noticeable increase in attendance at public meetings since the close of the war, this year saw a definite increase in activities of all types on the campus, resulting in a decided need for more space for meetings, lectures, dramatic productions, concerts, conferences and ASSU functions.

TUESDAY EVENING SERIES

The Tuesday Evening Series for the four quarters comprised 37 programs, 10 of which were presented by members of the faculty, one by a visiting professor and one by a member of the Music Division in conjunction with an outside artist. Approximately 28,786 persons attended these programs over the year (an average of 778 persons per program). The following programs were presented on the 1946-47 Tuesday Evening Series:

- October 1. Lecture, "Soviet Union Revisited," Victor A. Yakhontoff (1,695).*
- October 8. Lecture, "With the United Nations at Bikini," Hugh H. Skilling (1,077).
- October 15. Lecture, "American Problems in the Pacific," Claude A. Buss (497).
- October 29. Lecture, "International Monopoly and Present International Discord," Theodore J. Kreps (648).
- November 5. Illustrated Lecture, "Wilderness Mischief," Olin Sewall Pettingill, Jr. (1,021).
- November 12. Motion Picture, "Grass" (1,118).
- November 19. Program of Music, Stanford University Symphony Orchestra and Stanford University Chorus; motion picture, "Hymn of Nations," with Arturo Toscanini (1,825).
- November 26. Recital, Paul Wittgenstein, pianist (1,740).
- January 7. Illustrated Lecture, "Music of the Out-of-Doors," Bert Harwell (1,330).
- January 14. Lecture, "How to End Our Quarrel with Russia in Germany," Karl Brandt (557).
- January 21. Illustrated Lecture, "Avian Giant of Ancient Skies," Telford Work (847).
- January 28. Organ Concert, Carl Weinrich, organist, Memorial Church (686).
- February 4. Lecture, "Civil War in China," John Earl Baker (423).
- February 11. Lecture, "Communitistic Dynamics and the Hope of Peace," A. Powell Davies (542).
- February 18. Illustrated Lecture, "Contemporary Houses," Ray Nelson Faulkner (1,008).
- February 25. Lecture, "UNRRA and After - What to do about Starvation and Suffering," Frank Munk (341).
- March 4. Lecture, "Imperialism vs. Nationalism in the Middle East," John S. Badeau (344).
- March 11. Recital, "American Folklore and Folk Music," John Jacob Niles (1,546).
- April 1. Illustrated Lecture, "The Importance of Imagination," Millard Sheets (600).

*Attendance is indicated by figures in parenthesis.

- April 8. Lecture, "Oxford During and After the War," D. Nichol Smith (362).
- April 15. Concert, William Crosten, piano; Arnold Small, violin; "The University Singers," (1,417).
- April 22. Illustrated Lecture, "From Seashore to Glacier," Karl H. Maslowski (1,426).
- April 29. Illustrated Lecture, "Mexico's California," Ira Wiggins (1,159).
- May 6. Lecture, "Report on Germany," Paul R. Hanna (937).
- May 13. Illustrated Lecture, "Secrets of the Tidepools," Rolf L. Bolin (1,006).
- May 20. Motion Pictures, "America Sails the Seas" and "The Movies March On" (542).
- May 27. Lecture, "Soviet and American Propaganda," George E. Taylor (420).
- June 24. Lecture, "The Contemporary American Theater," George Freedley (259).
- July 1. Illustrated Lecture, "Transplantation Experiments on Embryos," Graham P. DuShane (232).
- July 8. Lecture, "Brandeis: Radical or Conservative?" Alpheus Thomas Mason (326).
- July 15. Lecture, "How Gifted Children Turn Out: A Twenty-Five Year Follow-Up of a Large Superior Group," Lewis M. Terman (1,318).
- July 22. Illustrated Lecture, "Mystic Wonderlands of the Northwest," Clifford Nelson (1,872).
- July 29. Lecture, "The Nobel Prizes and Their Giver," Henry Neumann (176).
- August 5. Lecture, "The Place of War in the Education of Free Men," Horace Kallen (260).
- August 12. Lecture, "How the Revolution Came to Russia," Michael Karpovich (432).
- August 19. Lecture, "The Three R's on Maxwell Street," John A. Bartky (282).

MUSIC EVENTS

The Committee on Public Exercises presented five programs of music on the Tuesday Evening Series during the year: a program of music by the Stanford University Orchestra and the Stanford University Chorus, and a motion picture entitled "Hymn of Nations," with Arturo Toscanini; a piano recital by Paul Wittgenstein; an organ concert in Memorial Church by Carl Weinrich; a recital on "American Folklore and Folk Music," by John Jacob Niles; a concert by William Crosten, pianist, and Arnold Small, violinist, auspices Division of Music. Friends of Music at Stanford and the Committee on Public Exercises were joint sponsors of six chamber music concerts over the year: a program by Alexander Schneider, violinist, and Ralph Kirkpatrick, harpsichord player; a piano concert by Alfred Mirovitch; a concert by The Music Lovers Society; a Summer Festival of Chamber Music made up of two programs by the Alma Trio and one program by the San Diego String Quartet.

During the year, the Division of Music presented the Stanford String Quartet in a recital in the Women's Clubhouse, auspices Music Council; a Series of four Spring Concerts, including a program on the Tuesday Evening Series of April 15, a recital on April 20 in Memorial Church featuring the Stanford University Choir and Richard Purvis, guest organist, a program on April 27 in the Auditorium, Memorial Hall

by the Stanford University Orchestra and the Stanford University Chorus, and a production of "Cosi fan Tutte" by the Opera Players on May 9 in the Auditorium, Memorial Hall; a concert by the Stanford University Band in the Frost Amphitheatre; a program by the Men's Glee Club at a meeting of the Stanford Mother's Club; two short educational films accompanied by an informal lecture in the afternoon in the Auditorium, Memorial Hall; a concert in Cubberley Hall, Education Building, by the Stanford Chamber Orchestra with four guest artists. Also under the presentation of the Division of Music were 15 Carillon recitals and 38 organ recitals over the year.

The Associated Students of Stanford University presented five programs in the Auditorium, Memorial Hall, on their regular Concert Series: November 1, The Don Cossacks, chorus and dancers; January 13, Todd Duncan, baritone; February 7, The San Francisco Symphony Orchestra; April 10, Bidu Sayao, soprano; May 21, The San Francisco Symphony Orchestra. On May 23, the Associated Students presented their annual Spring Sing in the Laurence Frost Amphitheater.

SPECIAL EVENTS

The following special events took place during the 1946-47 academic year:

- October 14. Meeting of the American-Chinese Friendship Association.
- October 17. Colored Motion Picture, "The Hannibal Victory," auspices Graduate School of Business.
- October 24. Meeting of the American Society of Civil Engineers; Address by Walter Jessup; auspices Stanford Students Chapter.
- November 2. Meeting of the Classical Association of the Pacific States.
- November 4. Lecture, Dr. Karl Gruber; auspices Committee on Public Exercises.
- November 7. Lecture, "The Patterns of Sex Differences in Contemporary United States," Dr. Margaret Mead, Jacob Gimbel lecturer.
- January 16. Meeting of the American Society of Mechanical Engineers; "Wartime Developments in German Submarines," Alexander Louis London.
- January 30. Lecture, "Changing Vienna," Paul Dengler; auspices Committee on Public Exercises.
- February 2. Meeting of the International Club; program on Mexico.
- February 3. Lecture, "The Measure of a Man," James L. Kraft; auspices Memorial Church Committee.
- February 3. Lecture, "Romances of Chemical Research and Scientific Education in China," Peter P. T. Sah; auspices Department of Chemistry.
- February 5. Lecture, "Does Christianity Work in Business?" Arnold Grunigen, Jr.; auspices Memorial Church Committee.
- February 17. Lecture, "Problems in Surface Chemistry," George Jura; auspices Department of Chemistry.
- February 18. Sigma Xi National Lecture, "Modern Soil Science," Charles E. Kellogg; auspices Stanford Chapter Sigma Xi.
- February 20. Modern Dance Concert. Charles Weidman and Dance Company; auspices Committee on Public Exercises.
- February 23. Address, Charles G. Bolte, National Chairman of the American Veterans Committee, Inc.; auspices Stanford Chapter American Veterans Committee.
- February 28. Sigma Xi National Lecture, "Fifty Years of Atomic Physics," Henry D. Smyth; auspices Stanford Chapter Sigma Xi.

- March 6. Meeting of the American Society of Mechanical Engineers; "Aircraft Gas-Turbine Development," C. R. Garbett; auspices Department of Mechanical Engineering.
- April 2. Lecture, "Fine Crystal and American Achievement," Mrs. Katherine Hait Dorflinger; auspices Committee on Public Exercises.
- April 10. Meeting of the American Society of Mechanical Engineers; "Combustion Problems," M. H. MacPherson; auspices Department of Mechanical Engineering.
- April 16. Lecture, "'The Fault, Dear Brutus' - Poetic Example and Poetic Doctrine Today," Theodore Morrison; auspices School of Humanities.
- April 17. Modern Dance Concert; auspices Orchesis, honorary dance society.
- April 22. Timothy Hopkins Lecture, "The Chemical Structure and Function of Muscle."
- May 8. Meeting of the American Society of Mechanical Engineers; "War-time Quality Control Problems and Their Peacetime Applications," E. L. Grant; auspices Department of Mechanical Engineering.
- May 11. Folk Dance Festival; auspices Co-Recreational Committee, Associated Students of Stanford University.
- May 19. Law Students' Association Assembly for election of officers.
- May 19. Lecture, "The Comptroller; His Functions and Organization," J. Hugh Jackson; auspices Graduate School of Business.
- May 26. 53rd Annual Debate between Stanford University and the University of California for the Medaille Joffre; subject: "France and World Peace."
- May 26. Phi Beta Kappa Annual Open Meeting.
- July 9. International Discussion Group.
- August 14. Lecture, "The United Nations Today," Abraham H. Feller; joint sponsorship Stanford University and the World Affairs Council of Northern California.
- August 22. English Department Technicolor Sound Films; auspices Department of English.
- The Stanford Joint Branch of the American Institute of Electrical Engineers and Institute of Radio Engineers presented six lectures during the year: "German High quality Magnetic Sound Recording System," by J. T. Mulling on October 30; "Power Line Carrier Systems," by J. V. Kresser on February 19; "Radio Aids to Aerial Navigation," by Aldo De Rosa on March 5; "General Electric Short Wave Station KGEI," by H. M. Scholes on April 16; "Television - Its Operation and Its Future," by Frank P. Barnes on May 7; "Design Considerations for Two-Way Communications Equipment," by John M. Kaar on May 21.
- The Stanford University Medical School presented its sixty-fifth course of Popular Medical Lectures at Lane Hall, San Francisco, on April 11 and April 25.
- Four lecture programs were presented during the year on the Hispanic Series, under the auspices of the Committee on Latin American Studies and the Committee on Public Exercises: January 23, "Wildlife of Brazil," by George Sprague Myers; February 13, "How Portuguese Grew - From Rome to Rio," by Aurelio Espinosa, Jr.; April 9, "The Discovery of America," by Maxwell Hicks Saville; May 28, "Argentina and Her Neighbors," by Carl B. Spaeth.
- A group of seven programs were presented in Cubberley Hall, Education Building, during winter quarter on the Thursday Evening Education

Lecture Series, which was open to the public; January 23, "My Thumb and I," by Henry B. McDaniel; January 30, "The Two Chief Conflicting Curricular Currents in Higher Education," by William H. Cowley; February 6, "Modern Philosophies of Education," by Lawrence G. Thomas; February 13, "Division of Labor between the Teacher and the Psychologist," by Ernest R. Hilgard; February 20, "International Action in Education," by I. J. Quillen; February 27, "Possibilities and Shortcomings of Audio-Visual Aids in Education," by Reginald Bell; March 6, "Science Applied to Education," by John C. Almack.

A Revival Series of Early Films from the Museum of Modern Art Film Library was presented during the Spring Quarter by the Stanford University Film Society. Eight programs were scheduled on consecutive Thursday evenings in Gubberley Hall, Education Building. The Associated Students of Stanford University presented 28 Sunday evening programs during the year on their Motion Picture Series. The following groups continued to meet during the 1946-47 academic year:

Poetry Readings were held on 11 various afternoons during the Autumn, Winter and Spring Quarters.

Only one Faculty Forum was held during the year.

The Faculty Research Club met five times over the year.

The School of Biological Sciences held 25 seminars during Autumn, Winter and Spring Quarters.

The Stanford Philological Association met five times during the Autumn, Winter and Spring Quarters.

Nine meetings of the Geology Journal Club were held during Autumn, Winter and Spring Quarters.

A joint meeting of the School of Biological Sciences and the Journal Club of the School of Mineral Sciences was held during Spring Quarter.

SPECIAL SERVICES AND EXERCISES

During Autumn and Winter Quarters, 12 Student Worship Services were held in Memorial Church, with organ music, short readings, prayers and meditation for faculty and students.

Eight Candlelight Services were presented during Spring Quarter for faculty and students in Memorial Church.

Maundy Thursday Communion Service was held in Memorial Church on April 3.

On April 6, Easter Sunrise Service was held in the Frost Amphitheater.

CONFERENCES

The following Conferences were held during the year:
 November 2, Twenty-Third Annual Conference of the Central California Press Association; auspices Department of Journalism.
 December 29, Mid-Winter Diagnostic Conference of the Cancer Commission, California State Medical Association; Bacteriology Department Laboratory.
 March 28, 29, Athletic Federation of College Women; auspices Women's Athletic Association.
 April 5, High School Journalism Advisors; auspices Department of Journalism.
 April 10, 11, 12, 13, The Geological Society of America, Cordellera Section, and Associated Societies (Paleontological Society and Seismological Society); auspices Department of Geology.

- April 26, Society for Experimental Biology and Medicine; members only.
- April 26, American Mathematical Society.
- April 26, California Student Teachers Association.
- May 3, Fifteenth Annual Stanford Alumni Conference.
- May 9, 10, 11, Conference on International Relations; auspices Associated Students of Stanford University.
- May 25, Conference on World Student Service Fund; auspices Associated Students of Stanford University.
- July 11, 12, American Physical Society; auspices Department of Physics.
- July 14, 15, 16, 17, 18, Annual Stanford Business Conference; auspices Graduate School of Business.
- July 24, 25, 26, Stanford Education Conference; auspices Department of Education.
- July 25, 26, California School Trustees Association; auspices Department of Education.
- August 4, 5, 6, 7, Summer Conference on Ammonia Chemistry; auspices Department of Chemistry.
- August 18 through August 29, Association of Western Hospitals Institute.

ASSEMBLIES

The only all-University assembly held during the year was on January 14, at 4:15 p.m. in the Auditorium, Memorial Hall. President Donald B. Tresidder addressed the assembly, which was not well attended, apparently because of the hour.

The Associated Students of Stanford University were granted a student election assembly in the Auditorium, Memorial Hall, at 11:00 a.m. on May 23. Undergraduate classes were dismissed for the occasion.

FOUNDERS' DAY

The annual Founders' Day Exercises, in memory of Leland Stanford, Jane Lathrop Stanford and Leland Stanford, Jr. were held at 11:00 a.m. in Memorial Church on Sunday, March 9, 1947. President Donald B. Tresidder delivered the address, "United We Stand;" George J. Hall, Chaplain, gave the Invocation and the Benediction; the President and Vice President of the Associated Students of Stanford University performed the traditional ceremony of placing a wreath on the steps of the chancel in memory of the Founders; music for the occasion was provided by the organ and by the Stanford University Choir; the service was opened with a Processional and concluded with a Recessional of members of the Board of Trustees, Emeriti Professors, the four Class Presidents, Chancellor Wilbur, Chaplain Emeritus D. Charles Gardner, and Vice President Alvin C. Eulich, all in academic gown, led by President Tresidder and Chaplain Hall; carrillon music was played during the Processional and again following the Memorial Church Service.

COMMENCEMENT EXERCISES

The Fifty-Sixth Commencement Exercises at Stanford University were held in the Laurence Frost Memorial Amphitheater at 4:30 o'clock in the afternoon on Sunday, June 15, 1947.

The Commencement Week Program, under the guidance of George F. Sensabaugh, Commencement Chairman, began on Thursday, June 12, with the Senior Ball, which was held in the evening at the Fairmont Hotel, San Francisco; the Senior Class Pilgrimage of Commemoration to the

Tomb of the Founders was held at 11:00 a.m. on Sunday, June 14, and was followed by the Dedication of the 1947 Class Plate in Inner Quad; Senior Class Day Exercises took place at Cubberley Hall, Education Building, in the afternoon of that day, after which a reception was held at 4:00 p.m. in the home of President and Mrs. Donald B. Tresidder, honoring the candidates and their families.

At 12:00 o'clock noon on Saturday, June 14, the Fourth Outdoor Luncheon was held in the east and west terraces of Memorial Hall for recipients of degrees and their families, members of the faculty, and alumni. Virgil A. Anderson was chairman of the Luncheon, which was begun during the war as a courtesy in the face of war-time inconveniences such as gasoline rationing.

The Tower of the Hoover Library on War, Revolution and Peace and the Thomas Welton Stanford Art Gallery were open to visitors between 10:00 a.m. and 5:00 p.m. on Saturday, June 14, as a part of the Commencement Week Program.

Baccalaureate Services were held in the Memorial Church at 11:00 a.m. on Sunday, June 15. T. V. Smith of the University of Chicago delivered the address, "Ideals and Action," before approximately 2,500 people, including 707 candidates for degrees.

At the Commencement Exercises, which began at 4:30 p.m. in the Frost Amphitheater, President Donald B. Tresidder conferred 774 Bachelor of Arts and Bachelor of Science Degrees, 301 Advanced Degrees, and extended his greetings to the assembled candidates. W. P. Fuller, Jr. presented the Stanford War Memorial, after which Lee A. DuBridge delivered the address, "Science Calls for Help," to the graduating class and an audience of approximately 8,000 persons. Rixford K. Snyder, Head Marshal, was assisted by Robert L. Bacon, Seville Chapman, Adolph Meisen, George H. Knoles and D. Paul McKelvey. Participants in the Academic Procession, in addition to the Candidates for Degrees, included: Trustee members George Morell, Charles R. Blyth, Leland W. Cutler, Paul C. Edwards, Ira S. Lillick, Herman Phleger, and W. P. Fuller, Jr.; two guests, Lee A. DuBridge and T. V. Smith; President Donald B. Tresidder and Vice President Alvin C. Burich; and 76 faculty members. George J. Hall, Chaplain, pronounced the Invocation and would have given the Benediction had he not been called away on an emergency illness in his family; D. Sterling Wheelwright led the audience in the singing of the National Anthem at the beginning of the program and "Hail, Stanford, Hail," preceding the Benediction; assisted by Walter Wilcox, D. Sterling Wheelwright played the organ for the Exercises; James R. Lawson played a concert of Carillon music prior to the opening of the Exercises.

John M. Stalnaker was re-appointed Chairman of the Committee on Public Exercises for the 1947-48 academic year.

JOHN M. STALNAKER
Chairman

PUBLIC HEALTH

Members:- Charles E. Smith (chairman), Anastasia Doyle, George Houck, George S. Lockett, Sidney Raffel (vice chairman), John M. Stalnaker, Lois P. Todd.

Except for one epidemic of streptococcal sore throat comprising 98 clinical cases, the University continued to be free from all except sporadic infectious disease. This epidemic was associated with one of the dining halls. No complications such as scarlet fever or rheumatic fever occurred. The intensive isolation procedures carried out in the care of the patients probably assisted in limiting the infection as only one possible secondary case occurred. The diligence of the University Director of Public Health Service, Dr. George S. Lockett, and his Public Health Nurse, Miss Margaret Riassetto, contributed greatly to the excellent health of the University community. The procedure of Dr. Houck's Student Health Service in providing influenza vaccination probably was another factor in minimizing contagious disease. Moreover, just as was true the previous year, we have been fortunate in that contagious disease has ebbed in our part of the country. As this situation can be reversed at any time, the problem of how to cope with a possible extensive outbreak continues to haunt the Committee. The Committee reemphasizes the point made in the annual report last year that an infirmary building with possibility of expansion of unused space appears imperative. No adequate substitute has been discovered.

University regulations regarding food handling were studied and revised by the Committee. Approved by the Administration, they are now in effect.

CHARLES E. SMITH
Chairman

RESEARCH

The Committee on Supplementary Research Grants for 1946-47 consisted of Merrill K. Bennett, Ernest R. Hilgard, James W. McBain, Frederick E. Terman and David E. Faville (chairman).

No specific appropriation was made by the Trustees of the University as supplementary funds to assist members of the faculty in pursuing their research projects, but when all requests were in, the Committee considered them in the light of their merit and within the scope of the Committee's function to stimulate the initiation of new research projects requiring small funds. Grants totaling \$2,452 were recommended by the Committee and approved as follows:

<u>Recipient of Grant</u>	<u>Amount</u>	<u>Purpose</u>
Robert W. Ackerman	\$ 10.00	Defray postal charges for inter-library loans and to cover expense of having certain manuscript characters reproduced for publication of "Syre Gawene and the Carle of Carelyle: An Edition."
Skipwith W. Athey	\$350.00	Purchase equipment to be used in establishing criteria of minimum audible amounts of distortion in sound reproducing systems.
Thomas S. Barclay	\$125.00	Transcribing and stenographic assistance in St. Louis and Washington, D.C. in study of certain phases of politics in the Democratic Party during the years 1900-1910.
William A. Bonner	\$155.00	Purchase of two laboratory fractionating columns for separation of mixtures of organic liquids.
Leland T. Chapin	\$100.00	For purchase of records and hiring technicians to test the effectiveness of recorded speech in cooperation with the National Association of Teachers of Speech.
Richard H. Eastman	\$100.00	To secure micro-analytical determinations on certain chemical compounds.
Anna H. Hietanen	\$100.00	To photograph rock thin sections in completion of study of geology of the Turku Region in Finland.

<u>Recipient of Grant</u>	<u>Amount</u>	<u>Purpose</u>
Ernest R. Hilgard	\$250.00	For the purchase of equipment and supplies for study of individual differences in discriminatory conditioning in relation to personality variables.
Francis R. Johnson	\$125.00	Purchase of photostats and microfilm and defraying expense of technical assistance (transcribing) in research in rhetoric and prose literature of the English Renaissance.
James W. McBain	\$250.00	To help defray expense of replacing worn-out ex-ray tube for use with General Electric X-Ray Equipment.
Herbert D. Meritt	\$ 12.00	Purchase microfilm of Cotton M.S. Cleopatra A. III and the Canterbury Psalter in study of old English vocabulary.
Carl R. Noller	\$300.00	Defray cost of collecting and shipping in a supply of the plant "Scoparia Dulcis" to be used in the study of certain chemical phases of diabetes.
Juan B. Rael	\$150.00	Typing new Mexican Spanish folklore manuscripts as follows: (1) Religious hymns 400 pages (2) Folk tales 150 pages (3) Miscellaneous shorter manuscripts 150 pages.
Max Savelle	\$100.00	Typing, reading, and checking of manuscript material, and purchase of photographic materials in connection with study of "The Colonial Attitude Toward the Anglo-French Conflict 1750-1775" and "Biography of Pauline Dworzek."
George F. Sensabungh	\$ 25.00	Purchase of photostats for the purpose of checking this material with matter found in Eastern libraries and Huntington Library in study of Milton.

<u>Recipient of Grant</u>	<u>Amount</u>	<u>Purpose</u>
A. Nicholas Vardac	\$100.00	Defray expense of assembling, cataloging and typescripting research materials in study of transition of theatrical forms from stage to screen in preparation of volume to be titled "From Garrick to Griffith."
C. Langdon White	\$100.00	(a) Defray cost of periodicals, supplies, typing and castographic work to complete studies on the scientific location of industry.
	\$100.00	(b) Help defray field work expense on research study of industrialization possibilities in South America.

DAVID E. FAVILLE
Chairman

SCHOLARSHIP

The members of the Committee were Miss Elva F. Brown, Professors R. D. Harriman (Chairman), R. F. Jones, G. S. Parks, Karl Spangenberg, and Dean J. M. Stalnaker. Olivia Byler served as Scholarship Secretary.

SCHOLARSHIPS AND GRANTS-IN-AID

Although no appropriation for scholarships was made by the Board of Trustees, the lack was offset by an increase in income available from newly endowed scholarships, as well as from gifts. Money spent for scholarships exceeded by more than \$30,000 the amount spent in 1945-46. The increase is not actually so great as the figures seem to indicate, however, since certain funds listed as scholarship gifts for 1946-47 were, in 1945-46, listed under another account. The largest of such accounts is represented by the scholarships given by the National Foundation for Infantile Paralysis to physical therapy students, amounting in 1945-46 to \$12,481.

In addition to the scholarships listed below, grants-in-aid totalling \$8,417.37 passed through the Committee's hands for approval.

SCHOLARSHIPS AWARDED FOR THE YEAR 1946-47*

I. Holders Nominated by Committee on Scholarship

<u>Name of Scholarship</u>	<u>Holder</u>	<u>Amount</u>
Edwin N. Atherton	Edwin Martin Anderson	\$300.00
George Porter Baldwin	Luis Pena Pennington	475.00
Beach Thompson	Marguerite Louise Grunewald	600.00
Capt. Quentin R. Birchard	1 William Martin Granfield	125.00
Ella and Evelyn Briggs	Mary Margaret O'Neal	600.00
	1 Isobel Lindsay Ray	43.00
Margaret Byrne	Marian Lynette Baker	487.00
	Guyla Runyan	487.00
Cap and Gown	Marie Elena Wagner	500.00
William W. Carson	124 Gunter Sewald Jaffe	390.00
	Beverly Ann Leggett	390.00
	Elizabeth Yvonne Osterman	390.00
	Halka Modjeska Pattison	390.00
Chi Psi	3 Charles Thomas Van Deusen	200.00
Cleveland	Christine Roma Kayser	400.00
E. C. Converse	Halcyon May Harris	500.00
	23 Joanna Elizabeth Klasson	450.00
	Cole Manes, Jr.	500.00
	Phyllis Anne Ward	500.00
George B. Culver, Jr. Memorial	3 Luis Pena Pennington	50.00
Harry and Alice Derby	Mary Virginia Pond	610.00
W. F. Detert	13 Alfred Kenneth Schellinger	534.00
Henry G. Dodds	Alan Bechtel Strain	390.00
Robert Dofflemeyer	Byron Lee Geuy	670.00
	Walter George Gunn	670.00
	Michael Morton Minchin, Jr.	700.00
Orrin W. Dunn	1 John Benjamin Miss	218.00

* 1 Autumn quarter; 2 winter quarter; 3 spring quarter; 4 summer quarter; 5 all four quarters. No figure signifies autumn, winter and spring quarters.

Scholarship

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Bertha Dworzek	(Mrs.) Phyllis Willson Jacobs Stickney	\$390.00
Eva Dworzek	12 Marilyn Reams Savage	260.00
Gustave Dworzek	Beth Eleanor Childs	390.00
Margaret Dworzek	Joan Wonder	390.00
Leonard D. Ellis	Eleanor Christensen	573.00
	Wesley Allen Kissel	573.00
Hiram C. Fisk	1 Pauline Huntington	85.00
George E. Gamble	Paul Raymond Baker	600.00
	23 Lowell Lund Bowen	400.00
	Donald Lee Christman	600.00
	1 David Wendell Crabb, Jr.	200.00
	1 David Evans De Swarte	200.00
	1 Richard Warren Drisko	200.00
	Thomas Walter Elke	600.00
	Glenn Fuller	600.00
	Leland Ray Gardner	600.00
	1 Edward Theodore Marion	200.00
	Joseph Carl Mitchell	600.00
	Walter Stanley Scheib, Jr.	600.00
	Lewis Kelly Scott	600.00
	Kendrick Charles Smith	600.00
Frank Gard	Lawrence Allan Carlsmith	429.00
Gertrude Gardiner	23 Virginia Elizabeth Voegeli	200.00
William Garland Memorial	Robert Eugene Quoidbach	399.00
Justitia J. C. Glennie	Helene Louise West	293.00
Nathaniel G. Guiberson, Jr.	Alfred Bob Phillips	500.00
William Haas	Eleanor Louise Cole	380.00
	12 Carolyn Ann Recht	400.00
Raymond O. Hanson	Alan Bechtel Strain	225.00
Elston Mills Harrison	12 Joanna Elizabeth Klasson	234.00
William F. Herrin	23 Dorothy Ann Dodge	176.00
Brodie G. Higley	1 Paul Wong	117.00
E. W. Hopkins	Joan Irean Behr	600.00
	Helen Anabel Phillips	600.00
Gladys Horner	12 Dorothy Ann Dodge	250.00
	Eileen Dolores Moran	450.00
Chas. W. Kendrick	David Sheldon Larimer	500.00
James F. Lanagan	Carl Fred Strahm	500.00
Juliet L.K. Lockwood	12 Barbara Jeanne Denning	195.00
Ernest Gale Martin	Donald Giltner Landale	400.00
Julius H. Martin	2 John Parsons Glathe	100.00
	12 Virginia Elizabeth Voegeli	300.00
	Douglas Rand Woodworth	450.00
Dorothy A. Metz	23 Pauline Huntington	125.00
John Pearce Mitchell	Robert Watson Richardson	230.00
Robert & Florence Moore	1 Helen Adele Pinkerton	120.00
Nathaniel R. Morgan	Ellis Lincoln Roney	210.00
Henry Newell	Karl Leslie Brown	450.00
	Mary Kathrine Carnahan	450.00
	Frederic Gordon Cunard, Jr.	450.00
	Edward Allen Free	500.00
	Glen Eugene Fuller	450.00
	Basil Cleone Hansen	450.00
	Terry Leslie Hansen	450.00

Scholarship

	Janice Faith Isenberg	\$450.00
	Barbara Jones	450.00
	1 Alma Heath Kartchner	150.00
	1 Helen Lee Kirk	250.00
	34 William Peter Miller	300.00
	Barbara Jeanne Moore	600.00
	Janet Marie Ossman	450.00
	Samuel Grover Rich, Jr.	750.00
	Anadel Smith	450.00
	Don Clark Tanner	600.00
	Alice Noreen Tingey	450.00
Douglass E. Newton	23 Evelyn Konrad	240.00
John P. Phillips, Jr.	1 Jean Burnet	120.00
Henry W. Seale	124 Marianna Olmstead	135.00
Jessie D. Carr Seale	124 Marianna Olmstead	135.00
Senior Class	12 Joanne Nichols Fellows	222.00
Service Men's Memorial	Names upon request	2,986.00
David Silberman, Jr.	23 Marguerite Louise Grunewald	150.00
	24 Marianna Olmstead	85.00
	23 Helen Adele Pinkerton	185.00
	23 Douglas Rand Woodworth	80.00
Leon Sloss	23 Barbara Jeanne Denning	240.00
Louis & Sarah Sloss	12 Beth Macvicar	300.00
	1 Isobel Lindsay Ray	100.00
Stanford	3 Marian Lynette Baker	113.00
	3 Lawrence Allan Carlsmith	171.00
	Joan Florence Cooke	600.00
	3 Halcyon May Harris	100.00
	3 Coles Manes, Jr.	100.00
	3 Marshall Earl Nunn	210.00
	3 Phyllis Anne Ward	100.00
Leland Stanford, Jr.	Roy Wesley Hendrick, Jr.	270.00
Stanford Club of N.Y., N.J., and Conn.	William Gregory Blessing	499.95
Stanford Women's Club of the East Bay	1 Nancy Melrose Hand	150.00
Stanford Women's Club of San Francisco	Elizabeth Yvonne Stockton	345.00
Arthur B. Stewart	2 John Parsons Glathe	58.00
John M. Switzer	Doris Marie Carr	450.00
	2 Allan Alexander Gibb	150.00
	Lloyd Arthur Hall	450.00
	Helen Kilbourne Hayslette	450.00
	124 Gunter Sewald Jaffe	60.00
	Carson Dunning Jeffries	450.00
	23 Elaine Carlota Jones	300.00
	23 Helen Marie Kipple	255.00
	Beverly Ann Leggett	60.00
	Mary Ann McComb	450.00
	1 Frank William Oechali	150.00
	Elizabeth Yvonne Osterman	60.00
	Halka Modjeska Pattison	60.00
	23 Warren George Proctor	300.00
	23 Carolyn Celia Reeder	300.00

Scholarship

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	Rowena Jean Romer	\$450.00
	23 Marilyn Lois Silver	300.00
	Elizabeth Jane Spies	450.00
	Elizabeth Helen Tarr	450.00
	Eleanor Ruth Yost	750.00
Catherine Whalley Sykes	12 Helen Adele Pinkerton	195.00
Harry A. Trus	12 Virginia Lee Moore	260.00
Stanley W. Vanderburgh	1 Carmen Lea Fuqua	195.00
May Vertrees	2 Ann Elizabeth Wright	100.00
Royall Victor	Elizabeth Sager Brown	500.00
	John Menzel	500.00
Helen Bennett Voorhees	Mildred Alice Edwards	468.00
Ray Lyman Wilbur	Elizabeth Mann McMurray	500.00
Wilbur-Ellis Company	3 Luis Pena Pennington	75.00
	1 George Anthony Yaholkovsky	105.00
Women's Conference	Beatrice Patricia Snively	400.00
Jacob & Mary S. Yost	Mary Ernestine Riedel	345.00
	TOTAL	\$54,995.95

II. Holders Nominated by Donors or Special Committees

Alumni Association	James Wesley Fry	500.00
	2 Carmen Lea Fuqua	166.65
	3 Harleigh Thayer Knott	166.70
	Katharine Knight Royal	500.00
	Verne Norman Schumaker	500.00
	12 Frederic Thomas Shipp, Jr.	333.30
	Frances Joan Williams	500.00
	Joan Willoughby	500.00
American Smelting and Refining	23 Calvin Charles Enderlin	400.00
	23 Robert Bruce Hinze	600.00
Anonymous	1 (Mrs.) Mary Corbett Benjamin	139.50
	Jacqueline Boucher	499.95
	Gertrude Marie Evans	200.00
	Margaret Joan Hodgson	1,089.30
	Mary Faith Martin	400.00
Army and Navy	Joanne Elizabeth Cross	300.00
Harry L. Borders	James Evans Mack	300.00
	William Richardson Mitchell	200.00
Guy C. Bowman	Carol Kellogg	391.00
Chinese Cultural	Glen William Baxter	1,000.00
	Nancy Catherine Kendall	1,500.00
	Donald Earl Mac Innis	1,000.00
	23 Harris Inwood Martin	1,000.00
	23 Jerome William Rubin	1,000.00
	Stanley Shpetner	1,000.00
	Alan MacKenzie Sloane	1,000.00
	1 Allen Spitzer	500.00
Committee on War Services	12 John Frederic Kikuchi	200.00
Mabel Hyde Cory	Jean Walls Morasco	390.00
Creole Petroleum	4 Carlos Eduardo Key	166.65
Douglas Aircraft	Arthur Searle Benson	1,000.00
	Jacob Hugh Jackson, Jr.	500.00
	Robert Edgar McCaughna	500.00
Florence H. Fries	12 Helen Marie Kipple	195.00

John M. Haffner

Carrie Hassler

Lagunita Junior Class

Frederick D. Michaels

Oscar W. & Mary

Strowbridge Muelhaupt

National Foundation for

Infantile Paralysis

John Marshall Brenner

Burt Lacklen Talcott

Isolde Eva Loewinger

2 June Fisher

Paul Watson Mouser

4 Annette Pauline Eggers

12 Mary Faye Amster

4 Marian Lucille Barkdull

Edith Muriel Bennett

Helen Blood

12 Virginia Ann Bogart

12 Gertrude Brentano

Eleanor Nancy Cira

1 June Rose Collier

4 Betty Naomi Cunningham

4 Constance Jean Decker

234 Alden Capp Douglass

4 Norma Jean Ewan

4 Florence Marie Finney

5 Barbara Marie Fitch

4 Jim Mason Gray

4 Ruby Mae Green

4 Frances Susan Grover

1 Dorothy Haughton

4 Sara Elizabeth Heaslett

12 Louise Hall Henry

234 Lois Ann Hodges

1 Anne Houston

Mary J. Kanney

4 Clara Welte Kestner

234 La Juana Kofford

Afton Kunz

4 Harriet Jean Landis

1 Elizabeth Caroline Lane

1 Helen May Lee

4 Walter Herman Lohans

234 Carolyn Virginia McKewen

1 Mary Ann Morgenstern

1 Mary Josephine Moxley

4 Janet Baird Nelson

234 Mary Martha Ragland

Lois Ann Ramsay

234 Marie Jane Reed

234 Alma Collins Riess

1 Bernice Frida Ringman

4 Clarissa Anne Smith

1 Sylvia Marie Smith

5 Esther Eleanor Snell

234 Myra Belle Stinson

12 Catherine LuPreal Summerhays

1 Patricia Ann Swanson

12 Edna Joan Turnquist

\$345.00

345.00

600.00

150.00

390.00

229.00

333.30

166.65

600.00

499.95

333.30

261.65

499.95

166.65

166.65

166.65

428.30

166.65

166.65

380.00

166.65

166.65

166.65

166.65

166.65

333.30

428.30

166.65

499.95

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166.65

333.30

	234 Dorothy Helen Upham	\$428.30
	4 Elizabeth Mildred Waite	166.65
	234 Margaret Lee Wallace	428.30
	1 Emma Jane Wilder	166.65
	12 Juanita Ione Woods	333.30
William D. Pawley		
Aeronautical	5Chiutakindi Venkata Joga Rao	1,260.95
Pepsi-Cola	Betty Star Burt	499.95
	Dorothy Rae Carmen	499.95
	12 Thomas Patrick Conlin	333.30
	Richard Dean Esbenshade	499.95
	Norma Leigh	499.95
	Marion Francis Morrow	499.95
Margaret R. Peterson	12 Annette Pauline Eggers	284.00
David & Lavinia Sloan	234 Richard Warren Drisko	500.00
Stanford Club of Chicago	Kathryn Antoinette Manfrin	499.95
	Francis Paul Satko	499.95
Stanford Law	23 Victoria Lila May Glennon	199.00
	1 John Clement Thompson	134.00
Stanford Mathematics	Alan Kellerman Jennings	500.00
Stanford Women's Club		
of Los Angeles	Helen Blanche Reed	499.95
John Maxson Stillman	Robert Watson Richardson	150.00
John van Steen Tolman	Ellis Earl Roberts	500.00
F. W. Van Sicklen	23 Mary Louise Everly	333.30
Agnes Walker	Vivian Ruth Fleming	600.00
James Birdsall Weter	234 Mary Frances Westcott Gray	444.00
Clarke Butler Whittier	12 Victoria Lila May Glennon	191.00
Chas. B. Wing Civil		
Engineering	12 Howard Orval Christensen	212.00
Women's Athletic Ass'n.	Jacqueline Flanders	500.00
	TOTAL	\$45,918.60

I. Holders Nominated by Committee on		
Scholarship	\$54,995.95	
II. Holders Nominated by Donors or		
Special Committees	<u>\$45,918.60</u>	
Grand Total		\$100,914.55
HONORS		

Graduation honors were conferred on fifteen percent of all students completing requirements for the degree of Bachelor of Arts or Bachelor of Science during the four quarters ending with the spring of 1947. Great Distinction was earned by 54 students and Distinction by 91. Their names are listed in the Commencement Program and in the "Register."

Lower Division honors were conferred on 123 students, who constituted ten percent of the students completing Lower Division requirements during the four quarters of the academic year 1946-47.

SCHOLASTIC DEFICIENCY

During the four quarters of the year 103 students were disqualified, 152 were suspended, and probation was imposed 745 times. In the case of the probation students, the number of individuals is less than the total number of probations, since some students

incurred probation two or three times. The suspension and disqualification figures include some students who were on probation during an earlier quarter.

	Dis.	Sus.	Prob.	Total
Autumn	32	57	241	330
Winter	28	35	246	309
Spring	31	47	206	284
Summer	<u>12</u>	<u>13</u>	<u>52</u>	<u>77</u>
Total	103	152	745	1000

Mrs. Byler made a study of the records of veterans who had been disqualified preceding their period of military service, and reinstated following their discharge. Her report follows.

REPORT ON REINSTATEMENT OF VETERANS (As of October 15, 1947)

After the war ended the Scholarship Committee received numerous requests from men who had been in the service and who wished to return to the University, even though their previous Stanford record had been so poor that it had resulted in their disqualification. It was their belief that the previously deficient work was due largely to emotional instability brought on by disturbed world conditions. In the hope that with added maturity and their military service behind them these veterans would do satisfactory academic work, the Committee has to date granted reinstatement to 76 veterans since V-J Day. These students (75 men and 1 woman) had been disqualified just before or during the war years, with deficiencies ranging from -8 to -61 gradepoints. In some cases, upon their return, part of their deficiency was cancelled by means of retroactive leaves of absence granted for their final quarter before entering the service, during which, in many cases, the bulk of the deficiency was incurred.

At this writing 63 of the reinstated veterans have been in attendance at the University for one or more quarters since their return; 13 have not been in attendance long enough to make a record or have not registered at all. Presumably this latter group applied for reinstatement in order to clear their records.

In general, the reinstated veterans have given an excellent account of themselves: 50 have made substantial progress toward bringing their work up to standard (13 of these have maintained consistent B or better averages); 4 have made some slight progress, but not sufficient, in the judgment of the Scholarship Committee, to justify continued attendance; only 9 of the 63 have increased their deficiency. Expressed in terms of percent, it may be said that 81% have clearly demonstrated success, while 19% have failed to do so.

Here follows a resume of the positive and negative sides of the picture:

Positive	Negative
16 have earned their A.B. degree	12 have been disqualified or suspended
35 have done consistently good work (have never incurred a deficiency since their reinstatement)	7 have done consistently poor work (have never earned a surplus since their reinstatement)
19 have done creditable work	2 have done unsatisfactory

(have shown a net gain in work (have shown a net loss
grade-points over 2 or more in grade-points over 2 or more
quarters) quarters)

A follow-up study will be made in a year, and a further report made as to the continued progress of these reinstated veterans.

RATIO OF GRADE POINTS TO REGISTERED UNITS

The all-university average, the men's average, and the women's average were all slightly higher than they were last year. It will be seen from the comparative figures given below that the difference in the women's and all-university averages is insignificant. The men's average, however, is perceptibly higher; it is, in fact, the highest average recorded in the history of the University.

	<u>1945-46</u>	<u>1946-47</u>
University	2.57	2.58
Women	2.65	2.66
Men	2.49	2.55

The averages for the various undergraduate groups are listed below.

The column headed "Standing" shows how the ratios of the individual groups compare with the average of the University. The difference between the University average (2.58) and a perfect score (4.00) is divided into ten equal parts, and each group average is numbered according to the interval in which it falls. Thus a group whose standing is "+2" has an average between 2.72 and 2.86 inclusive. The same intervals are used to indicate ratios below the University average.

GENERAL

	Average Number Students	Stand- ing	Average Ratio of Grade Points to Registered Units			
			Autumn Winter Spring Year Quarter Quarter Quarter			
			Year	Quarter	Quarter	Quarter
University.....	4,544	0	2.58	2.57	2.58	2.59
Women.....	1,412	+1	2.66	2.63	2.66	2.68
Men.....	3,131	-1	2.55	2.54	2.55	2.55

CLASSIFICATION BY ORGANIZATION

	Average Number Students	Stand- ing	Average Ratio of Grade Points to Registered Units			
			Autumn Winter Spring Year Quarter Quarter Quarter			
			Year	Quarter	Quarter	Quarter
WOMEN						
Non-Organization Stu- dents	134	+1	2.69	2.69	2.64	2.78
University Residence Clubs	1,252	+1	2.66	2.63	2.66	2.67
Casa Ventura	54	+2	2.80	2.82	2.77	2.80
Durand	30	+1	2.72	2.67	2.67	2.81
Roble	247	+1	2.70	2.69	2.73	2.68
Lagunita	291	+1	2.70	2.71	2.67	2.72
Casa Eucalypto	59	+2	2.76	2.76	2.72	2.80
Casa Olivo	34	+2	2.75	2.72	2.73	2.80
Casa Granada	45	+1	2.72	2.76	2.56	2.84

Casa Naranja	49	+1	2.70	2.78	2.65	2.67
Casa Magnolia	56	+1	2.69	2.59	2.80	2.68
Casa Adelfa	49	0	2.58	2.65	2.55	2.55
Union	68	+1	2.67	2.62	2.63	2.77
Branner	173	+1	2.67	2.63	2.75	2.64
Elm	7	+1	2.67	2.14	2.71	2.90
Jordan	34	+1	2.66	2.65	2.65	2.68
Manzanita	15	+1	2.66	2.63	2.59	2.78
Hawthorne	11	+1	2.65	2.60	2.77	2.62
Storey	31	+1	2.64	2.63	2.51	2.80
The Oaks	16	+1	2.61	2.66	2.57	2.60
Mariposa	22	0	2.58	2.66	2.54	2.54
Cubberley	29	0	2.58	2.29	2.65	2.81
Lathrop	31	-1	2.56	2.48	2.70	2.49
Russell	31	-1	2.55	2.52	2.58	2.56
Guthrie	31	-1	2.52	2.43	2.60	2.53
Madrono	34	-1	2.52	2.59	2.53	2.43
Village	29	-1	2.51	2.46	2.53	2.54
Hurlburt	35	-1	2.48	2.59	2.32	2.54
Roth	33	-2	2.42	2.28	2.44	2.56
Klahoya	26	-1	2.52	2.52	2.47	2.72
MEN						
Eating Clubs	142	+1	2.66	2.68	2.64	2.66
Los Arcos	17	+3	2.93	2.99	2.83	2.97
Breakers	21	+2	2.86	2.86	2.84	2.88
El Toro	23	+2	2.78	2.72	2.80	2.80
El Cuadro	17	-1	2.56	2.79	2.43	2.46
El Capitan	22	-1	2.54	2.46	2.60	2.55
El Tigre	19	-1	2.54	2.45	2.54	2.63
El Campo	22	-1	2.51	2.61	2.49	2.44
Non-Organization Students	890	+1	2.60	2.60	2.61	2.57
University Residence Clubs	1,482	+1	2.59	2.60	2.60	2.58
Toyon	250	+1	2.66	2.67	2.66	2.63
Village	671	+1	2.60	2.62	2.61	2.58
Encina	561	-1	2.55	2.54	2.56	2.57
Fraternities	769	-2	2.41	2.35	2.39	2.47
Sigma Chi	39	+1	2.65	2.47	2.83	2.64
Kappa Alpha	29	+1	2.64	2.53	2.78	2.64
Alpha Sigma Phi	17	+1	2.63	2.93	2.39	2.69
Alpha Kappa Lambda	25	-1	2.56	2.59	2.63	2.47
Alpha Tau Omega	34	-1	2.54	2.53	2.42	2.64
Theta Chi	29	-1	2.54	2.57	2.51	2.55
Beta Theta Pi	41	-1	2.50	2.24	2.57	2.69
Delta Chi	19	-1	2.48	2.44	2.52	2.47
Chi Psi	26	-1	2.46	2.50	2.41	2.46
Delta Tau Delta	38	-1	2.46	2.39	2.52	2.47
Phi Delta Theta	40	-2	2.42	2.43	2.35	2.50
Delta Upsilon	31	-2	2.41	2.35	2.30	2.57
Kappa Sigma	31	-2	2.41	2.47	2.27	2.51
Phi Kappa Psi	47	-2	2.41	2.27	2.46	2.48
Sigma Alpha Epsilon	42	-2	2.41	2.22	2.48	2.52
Theta Xi	28	-2	2.41	2.46	2.40	2.38

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Phi Gamma Delta	46	-2	2.37	2.35	2.33	2.44
Phi Kappa Sigma	29	-2	2.35	2.24	2.29	2.51
Sigma Nu	32	-2	2.30	2.36	2.16	2.38
Theta Delta Chi	23	-2	2.30	2.15	2.39	2.31
Zeta Psi	32	-3	2.29	2.45	2.10	2.31
Alpha Delta Phi	30	-3	2.20	2.30	2.20	2.12
Phi Sigma Kappa	30	-3	2.15	1.85	2.20	2.34
Delta Kappa Epsilon	31	-4	2.08	1.91	2.20	2.15

R. D. Harriman,
Chairman

UNIVERSITY PUBLICATIONS

Members of the Committee on University Publications for the academic year 1946-47 were Professors Merrill K. Bennett, Arthur E. Bestor, Gordon F. Ferris, Richard F. Jones, and David E. Faville (chairman).

The committee met regularly on the second Tuesday of each month with Mr. Donald P. Bean, Director of the Stanford Press, as a policy making and manuscript approving body for the scholarly publishing problems of the University. Professor Richard F. Jones served as secretary of the committee, which passed on a total of 31 manuscripts during the year. Of these, 8 were submitted by Stanford faculty members, while 23 were from non-Stanford sources. Of the Stanford manuscripts, 5 were accepted for publication and 3 were deferred. Of the non-Stanford manuscripts, 16 were accepted for publication, 3 were rejected, and 4 were deferred.

The committee's resources for the handling of funds assigned for publications in the University Series amounted to \$750. This sum was augmented by \$300 from royalties accruing to the committee from a previous publication grant, thus making the committee's appropriable budget \$1050. This sum was assigned for the publication in the History, Economics and Political Science group of the University Series of Professor John J. Johnson's manuscript on "The Telegraph in Chile 1852-1872."

During the year the manuscript by Professors Douglas H. Campbell and Ira L. Wiggins on "Origins of the Flora of California" was published as Number 1, Volume X in the Biological Sciences group of the University Series. The manuscript on "Aesthetic Relativity" by Professor Henry Lanz was published as Number 1, Volume VII in the Language and Literature group of the Series.

DAVID E. FAVILLE
Chairman

VOCATIONAL GUIDANCE

The Committee on Vocational Guidance prepared itself early in the academic year to aid in all ways possible the student groups interested in vocational problems. The afternoon of October 9 was spent by this faculty group hearing Miss Doyle and Mr. Beatty describe typical student needs. On January 21 Mr. Barahal, the Veterans' Coordinator for the campus, Dr. Russell, Chief of the Advisement and Guidance Section of the San Francisco Branch Office of the Veterans' Administration, Mr. Day, the local Advisement Representative, and Mr. Davis, the Senior Training Officer described the newly established Veterans' Guidance Center and some of its problems. On April 22 Dr. McDaniel, who had joined the Stanford family in January as an expert in guidance, discussed with the Committee the major problems of vocational guidance and described a project he has been supervising in which the vocational outlets of each departmental major are outlined.

The membership of the Committee on Vocational Guidance for the academic year consisted of Deans A. J. Bartky and J. M. Stalnaker, Miss Anastasia Doyle, and Professors H. H. Skilling, H. B. McDaniel (after January 1), and P. R. Farnsworth.

Paul R. Farnsworth, Chairman

COMMITTEE ON STUDENT AFFAIRS

The members of the Committee on Student Affairs were Professors Harold M. Bacon, Chairman, David L. Bassett, Alfred H. Grommon, Herbert J. Popper, and Dean John M. Stalnaker.

It has been the purpose of the Committee to serve the President and the Dean of Students in an advisory capacity on matters of policy in student affairs. It has held a regular meeting in each of the four quarters of the year, and one additional meeting in the winter quarter, in furtherance of this general purpose.

Upon the resignation of Mr. Stalnaker as Dean of Students, the chairman and other members of the Committee wish to record their appreciation of the faithful and efficient service which he has rendered the students and the University in that position. He has the respect, the confidence, and the sincere good wishes of his colleagues.

Harold M. Bacon

COMMITTEE ON INSTRUCTION IN STATISTICS

Committee members for the year were Eugene L. Grant, Chairman, Quinn McNemar, and George Polya.

During the year the committee gave six-hour written examinations to two candidates for the Ph.D. degree presenting a minor in Statistics. These were Milton Lipton (major, Economics) and Moncrieff H. Smith, Jr. (major, Psychology). Both candidates passed these written qualifying examinations and subsequently passed the University oral examinations.

Two meetings were held during the year to which all members of the Stanford faculty interested in instruction in statistics were invited. One of these was the regular meeting for the election of the Committee on Instruction in Statistics for the following year. Those elected were Professors Polya, Spurr, and Working. At the other meeting, Professors Spurr and Hadley of the Graduate School of Business presented matters related to statistics instruction in that school. The members of the faculty then gave brief descriptions of their own statistics courses, and the question of the relationship among all of the statistics courses in the University received general discussion.

During the year the committee made arrangements for two new courses. One is Mathematics 126, Statistical Inference; the other, a statistics colloquium to be given in the Department of Mathematics. These will be offered by Professor Albert Bowker in the autumn and winter quarters of 1947-48.

Eugene L. Grant
Chairman

SCHEDULES AND EXAMINATIONS

The Committee on Schedules and Examinations included the following members: Hadley Kirkman, Alfred S. Miles, George S. Parks, Virgil K. Whitaker (Chairman), H. Donald Winbigler.

The committee continued to devote much of its time to problems arising from the increased enrollment in the university. The Time Schedule for the autumn quarter was carefully checked to make sure that enough classes were placed at noon and in the afternoon hours, and further adjustments were made in the scheduling of required courses to avoid conflicts. When it became apparent that the use of afternoon hours and the scheduling of classes on both Monday-Wednesday-Friday, and Monday-Tuesday-Thursday would not provide adequate class rooms, the committee voted on April 17 to require that half of the morning classes be scheduled on Tuesday, Thursday and Saturday, beginning with the autumn quarter of 1947.

In an effort to improve registration procedures, the committee introduced pre-registration for Upper Division students, at first at the option of individual departments. It soon became clear that optional pre-registration was unsatisfactory and that some departments were opposed to pre-registration. The committee therefore polled the university schools and departments during the spring quarter and, when this poll showed that most departments favored pre-registration, arranged for general pre-registration in the Upper Division for summer and autumn quarter. It expects to continue this policy in subsequent quarters. At the same time, it reduced the registration period at the beginning of winter, spring, and summer quarters to one day each, in an effort to gain time for instruction.

The increased enrollment has also complicated the giving of final examinations. To minimize last-minute adjustments, the committee arranged to include group examinations among those regularly listed in the Time Schedule. The attention of the faculty as a whole and of individual faculty members has been called to the regulations of the Academic Council with respect to dead week and to deviations from the printed examination schedule.

Finally, the Registrar's office has been making a careful study of the enrollment in university classes as a basis for subsequent efforts by the committee to provide sufficient class rooms or to minimize conflicts between courses that a student may wish to take.

VIRGIL K. WHITAKER
Chairman

FOREIGN STUDENTS

The Committee on Foreign Students has been busy this past year studying the problems presented by non-English speaking students in American colleges and universities and planning the program that it believes is best adapted to the situation here at Stanford. From the beginning, the committee has been unanimous in agreeing on two basic concepts: (1) The student from a non-English speaking country cannot, in all respects, be fitted into the general program of requirements and courses designed for the regular English speaking student because he presents special problems not adequately taken care of in that program; and (2) If Stanford is to follow a policy of admitting foreign students, then adequate steps should be taken to meet those problems.

1. The first, and most serious, problem presented by the foreign student, the committee believes, relates to his lack of competence in the use of English, both oral and written. This applies both to the expressive side of language-- writing and speaking-- and to the receptive side-- reading and aural comprehension. This inadequacy, in the majority of instances, the committee has found, is sufficiently serious as to make very difficult, if not impossible, the carrying of an adequate load of courses in Lower Division or in the student's major field. As a matter of fact, it is often difficult to find any courses of regular academic quality that the student is capable of carrying during his first or second quarter of residence until his command of English improves.

Therefore, the first task, as the committee sees it, is to set up a concentrated program of courses in both written and spoken English that will occupy the major portion of the student's time and units during his first quarter of residence to give him sufficient background to begin serious work in his major field during his second quarter. The committee is giving attention to the development of such courses, feeling that what we have been able to do thus far is inadequate.

2. The second problem to which the committee has given attention is two-fold: (a) First, there is the task of catching the foreign student when he arrives and insuring that he is given the training in language that he needs. Without some kind of requirement, we have found that frequently, for one reason or another, the foreign student doesn't get into the proper language course if he is left to his own devices or is merely advised by his departmental adviser. (b) Then, there is the problem of grading and placement. The foreign students differ considerably in both the training they have had in English prior to coming to Stanford and in their command of English, and there is, incidentally, we have found, not always a close connection between the two.

To meet this problem the committee decided to recommend

FOREIGN STUDENTS

an English entrance and placement test that all foreign students would take upon matriculation upon which could be based one of several recommendations with respect to the student's program in English and other subjects.

The committee's plan in this regard was presented in more detail in a recommendation prepared for the Committee on Admissions and Advanced Standing. This proposal was accepted by this committee and we hope to institute the outlined program into the autumn quarter matriculation program.

3. The committee feels that there is a responsibility beyond those set forth in items 1 and 2 above concerning which the University should probably take some action. This has to do with a more careful-- perhaps paternalistic is the word-- advisory set-up for the foreign student than we have thus far had. This advising would proceed along two lines:

- (a) More careful advising in regard to academic program by individuals who understand the foreign student's problems and who would have him as their special responsibility. For the Upper Division and Graduate student the committee sees no practical means of handling this except through special departmental advisers through whom and with whom the committee can cooperate closely.

For the Lower Division student, however, the committee does have a more specific plan, details of which are presented in item 4 below.

- (b) A more comprehensive guidance and orientation program for the foreign student than we have had thus far (we have had virtually none, except for the more or less informal and wholly student sponsored International Club). We feel that we have some responsibility toward these students to teach them something (in addition to what they get in courses) of American life, culture, and institutions, and to provide more opportunities for contact with American Students. There are many possibilities here, some of which could be realized only with the help and cooperation of the American students on the campus. We have assurance that such cooperation would be forthcoming if our committee could assume some responsibility and leadership here.

- 4. In order to accomplish the objectives outlined in the paragraphs above, the committee recommends that two Lower Division advisers be added to the committee who will have as their special responsibility (a) to advise Lower Division foreign students and (b) to cooperate with students and student organizations to provide some of the guidance and orientation mentioned in item 3 (b).

Virgil A. Anderson, Chairman
Committee on Foreign Students

APPENDIX IV

ADMINISTRATIVE REPORTS

BUSINESS MANAGER

I herewith submit to you the Annual Report of the Business Office for the year 1946-1947.

With Fall Registration setting a new all-time high of 7210 students, many problems were presented to the Business Office and its operating departments which were far above anything anticipated.

Certain reorganization procedures were planned during 1945-1946 to take place in 1947, and at the time of planning no allowance was made for the increased 1947 enrollment. This then gave our several departments the dual job of (1) reorganization and (2), handling twice the volume of business of the year 1945-1946.

We managed to get through the year and can now look back with pride on the job accomplished, although we were far from perfection.

OPERATING UNITS

Women's Residences

The Business Office operated the three main dormitories in addition to eight small residences.

The nine Lasen units were operated for both living and eating accommodations by the Dean of Students' Office, with counseling help from the Business Office.

The financial results of these operations will be shown in the final statement rendered your office by the Chief Accounting Officer.

Women's Dining Halls

The increased costs of food and the ever fluctuating prices of supplies taxed the efforts of all our dining hall directors. By constant checking of our food cost percentages, careful selection of our menus, and the reduction of one bottle of milk per person per meal, we were able to meet the budget estimates.

The increased board rates effective Fall of 1946 gave us the real help needed. During the Spring and Summer Quarters of 1947 increased food costs forced us to materially reduce our menus in order to stay within the allowable food percentages.

For financial information refer to the 1946-1947 report of the Chief Accounting Officer.

Men's Residences

Toyon and Encina Hall operated at above normal capacity. The janitorial services were extended to include room service twice a week. This was an improvement, and with reasonable assistance from the boys, this much service should be adequate.

Women directors were hired for Encina and Toyon. Both did commendable jobs and were indeed cooperative and helpful to the Business Office in handling the business affairs of the halls.

Toyon Hall needs improved social space. The social rooms should be renovated and refurnished in order to bring them up to the Stanford standard. These rooms and their furnishings have been

neglected over the past years. Plans are now under way for considering these improvements.

Men's Dining Halls

The only men's dining hall operated on the campus was Encina Commons. Fall Quarter, Encina opened its doors to men from Encina Hall, Toyon Hall, and the Eating Clubs.

Prior to the war, eating clubs had their own buildings, or were quartered in one of the small dining rooms of the Commons. With the large student enrollment and the need for all available space, all eating clubs were set up in one large dining room. This was not the spacious quarters the clubs requested, but it did provide them with a place to meet and eat and carry on their social activities.

Encina was operated as a cafeteria, and the operation was highly successful from both student and management point of view.

We concentrated all accounting for dining halls and the dormitories, including the Lasuen Houses, in the Union Accounting Office. This has enabled the directors and the Business Office personnel to get uniform reports within a reasonable time. The procedures between the University Accounting Office, the Union Accounting Office, and the Business Office need further improvements, and these will be worked out as we go along.

Stanford Village

The single student residences, out-of-quota family residences and guest house were officially opened on September 19, 1947. The first eight in-quota family residences were transferred to the University by Federal Public Housing Authority on October 7, 1946. The last of the three hundred in-quota family residences were completed April 3, 1947.

The average occupancy figures for the year ending August 31, 1947, are as follows:

	<u>Autumn</u> <u>1946</u>	<u>Winter</u> <u>1947</u>	<u>Spring</u> <u>1947</u>	<u>Summer</u> <u>1947</u>
Single Student Residences	1313	1264	1126	299
Family Residences				
In-quota and				
Out-of-quota	119	217	300	319

The Village guest houses, buildings 318 and 102-B, have a total of 22 rooms, single and double, with a total capacity of 31. The guest houses were established for emergency use only and have maintained an average occupancy of 90%.

Employees' quarters, with a capacity of 35, have maintained an average occupancy of 95%.

In addition to the above, the Village accommodated several large groups (Physical Therapy Workhouse, Physics Department Conference, School of Education Conference, visiting football teams,

visiting track teams, visiting chorus, and several miscellaneous groups.

The following services for Village residents were established during the year:

Accommodation Store	Laundry & Dry Cleaners
Barber Shop	Library
Bendix Self-Service Laundry	Meat Market
Bowling Alley	Nursery School
Dining Hall	Post Office
Elementary School & Kindergarten	Soda Fountain
Grocery Store	Study Rooms
Haberdashery	Village Club House

The Village has also made space available for the following University activities: Stanford Research Institute, School of Physical Therapy, and the Stanford Press.

Bendix Self-Service Laundry : Forty Bendix coin-operated machines were installed during the year, thirty-two in Building 351, two in Building 121, and one each in Buildings 123, 119, 117, 110, 108 and 324. 74,030 washes were run through the forty machines during the year. An additional twelve machines are being installed in the 200 and 300 series men's single residences.

Bowling Alley: 14,882 lines of bowling were played from November 1946 to May 1947. A total of 4,960 bowlers participated during this period. Fifteen leagues were organized and ran off their competition schedules during the report period.

Dining Hall: During the year there were 514,081 meals served on meal tickets, 24,671 cash meals, a total of 538,752.

In December a remodeling program was started in order to reduce the operating personnel necessary for the operation of the kitchen as left by the Army. This started with the relocation of the pot scullery to a more central location in the kitchen. This move eliminated the necessity of eleven full-time dishwashers. A stainless steel counter was added to the serving line to increase table service and counter space, for a better selection of items, less confusion in service and a general reduction in operating personnel, necessary with the old counter. The old dish room was re-decorated and converted into a small dining room, to be used for meetings and special parties of the students.

At the close of the Spring Quarter a complete renovation program was undertaken; namely: redecoration, painting of the kitchen, and rearranging of equipment in the kitchen. This reduces the unoccupied area of the kitchen by 9,000 square feet and enables closer supervision of all kitchen personnel and food preparation, decreases the possibility of food poisoning by making refrigeration accessible, and eliminates the continual cleaning necessary at present. The bake shop has been centralized into the main kitchen for better coordination and supervision, which decreases by one-third the floor space occupied by the bake shop.

In March, a rearrangement of the fountain equipment was made in order to create a more efficient service.

Commissary : The Commissary was opened to aid the fra-

ternities and Lasuen Houses. During the past year twenty fraternities and nine Lasuen Houses have availed themselves of the commissary service of dry stores and meats. Issues to the kitchen, fraternities and Lasuen Houses were: dry stores and supplies \$136,000 and meats, \$118,621.

A remodeling program was undertaken in the Commissary along with the rearrangement of the kitchen and bake shop, to further consolidate commissary activities of handling supplies. This was accomplished by knocking out a portion of the walls of the present store rooms, bake shop, two lavatories and one office.

Retail Meat Market: On July 2, 1947, a retail meat market was opened for the purpose of serving the residents of the apartments at Stanford Village, in order to give them their meats at the lowest possible cost.

Great credit is due Mr. Wunderlich, Mr. Rutledge and Mr. Adams. Stanford has the finest veterans' housing project in America.

Mimeograph Department

This department, as all departments of the University, felt the increased enrollment in increased demands for services. The department did \$8,056.71 in business with a net profit of \$458.05.

A survey is now being conducted to ascertain whether or not it will be possible to increase our activities and facilities so that all University mimeographing can be done at one central location. It is felt at this time that consolidation can be effected, and if so, a plan will be in operation during 1947-1948.

Photographic Department

The Photographic Department was activated and in operation June 1, 1947. Mr. James D. McClure was appointed as head photographer and department foreman reporting to Mr. Blacker of the Corporation Yard.

Mr. McClure combined the Photostat Department of the Corporation Yard with the newly formed Photographic Department. The department is on a six-months' trial basis.

MAINTENANCE UNITS

Corporation Yard

The majority of the work done by the Yard was of a routine maintenance type. New additions, specified by the Planning Department, were almost entirely handled by outside contractors. Remodeling and renovating was practically all done by our Corporation Yard.

A considerable amount of war surplus equipment and material was handled by the Corporation Yard. Throughout the year our equipment and men made trips to various depots in California collecting surplus property, and then distributing it to the Departments of the University.

On October 10, 1944, Mr. Carroll Blacker became Superintendent of Buildings and Grounds. He also served in this capacity

at Stanford Village. Mr. J. W. McDonnell was made Technical Advisor to the Planning Department.

The personnel of this department was increased to 101 men as compared to 93 for the year 1945-1946, and as compared to 113 for the year 1941.

PROTECTIVE UNITS

Police Department

The Department of Police is, (1) charged with the responsibility of enforcing all lawful rules and regulations on a standard set by the Penal Code of the State of California and/or any other rules and regulations deemed necessary and instituted by the Board of Trustees, the President, the Dean of Students, or the Business Manager of the University. (2) To enforce all traffic rules and regulations in the interest of maximum safety to all persons on the University property. (3) To judge violations and assess penalties in accordance with a scale set by the constitution of student government and approved by the University. (4) To maintain security of all University property, personal property, etc., within the University grounds, including Stanford Village.

The Department has a Chief of Police, five patrolmen, and two watchmen on the campus and two patrolmen at Stanford Village and one part-time watchman.

A motorcycle was added to the Campus equipment during 1946-1947 to assist in patrol work.

In September 1946 a car registration rule was placed in effect - all cars operated by students, faculty or staff personnel are registered with the department.

With the increased student body came an increased number of cars. Parking lots were established to handle an anticipated increase, but were not adequate to our needs. Traffic regulations were revamped to handle the increase, with the result that our accident and personal injury record was absolutely astounding - no serious accidents were reported during 1946-1947.

Fire Department

The Fire Department had an increase of approximately 15% in the number of calls and fires during 1946-1947. This does not necessarily relate to the increased student population, but it does show the necessity for having a sufficient, full-time department and adequate equipment.

In addition to our regular monthly inspections of all University buildings, monthly inspections were made of all fraternity and Lasuen houses. These inspections were instrumental in removing many fire hazards and in reducing our fire loss.

Uniform procedures for conducting fire drills in University living groups were adopted, and have been in practice.

We have six regular full-time firemen including the Chief, and thirteen student firemen.

Our equipment consists of one pumping engine (new), two tank trucks, one ladder truck, and the Chief's car.

Our present alarm system is old and obsolete. It should be replaced just as soon as funds are available.

It is also recommended that adequate fire escapes and internal fire alarms be installed without delay in all University dormitories.

SERVICE UNITS

Purchasing Department

The Academic Year 1946-1947 saw many radical changes in the make-up and procedure of the Purchasing Department. At the beginning of the year, one office was located in San Francisco in the Flood Building and was used primarily for purchasing for Stanford Hospitals. Another office was located in the Administration Building on the Campus, which office handled the University purchasing.

Considerable thought was given to the combining of these two offices and it was finally decided to close the San Francisco office and move all personnel to the Campus. This was accomplished on May 8, 1947.

Direct telephone service connecting the Purchasing Department on the Campus with San Francisco has proved more than satisfactory in providing daily purchasing service to Stanford Hospitals, in reduction of the load on the local switchboard, in a substantial saving in the cost of long distance calls, and in improved service to the academic and other departments of the University. Further service to Stanford Hospitals is taken care of by twice-weekly trips to the Hospitals by the Purchasing Agent.

Purchasing procedure and forms underwent a complete revision during the year, with the new forms and procedure taking effect March 21, 1947.

Since March 21, 1947, handling of interdepartmental transactions by requisition has saved the typing of over 4000 purchase orders. Budget encumbrances are made from the requisition form by Accounting rather than from the purchase orders as heretofore. Copies of purchase orders with the exception of those on government projects are no longer sent to the departments. This has enabled us to cut down the size of the regular University "C" purchase orders to four copies rather than eight copies as originally used.

Since the inception of the new procedure, Purchasing has processed over 10,000 requisitions or an average of 80 per day. 1230 purchase orders on government contracts have been issued in this period as against 4417 regular University purchase orders. During this period 3167 Hospital purchase orders were issued.

Stores Department

The Stores Department is now the central receiving and shipping station for the University. Mr. C. R. McClure was appointed Storekeeper on November 11, 1946, replacing Mr. Walsh who died suddenly of a heart attack. The department was reorganized to carry out the functions of Receiving, Issues, Stock Records, Order of Stores stocks, Shipping and Delivery Service.

From March 21, 1947, through August 31, 1947, the Stores Department received 9053 packages, 8573 for departments of the University, and 480 addressed to individuals. For the same period the Stores Department issued and filled 7194 requisitions from stock items.

In December 1946, we installed a new stores inventory system containing 8000 cards. Over 7500 are now in use.

From March 21, 1947 to August 31, 1947, more than 500 outgoing shipments were made. These shipments include materials returned to vendors, books and specimens to other institutions, and various articles on loan to the University.

From September 1, 1946 to August 31, 1947, the Stores volume of business was \$94,661.00 as compared to \$49,035.00 for 1945-1946.

Telephone

The principal activity of this department is the handling of all incoming and outgoing, local and long distance calls for the University.

Our equipment is fully utilized. There are a total of 415 working locals and two tie-lines to the Athletic Department. This is the capacity of the switchboard.

The volume of traffic has increased so steadily throughout the year that an additional position is required in order to operate in a most efficient manner and to avoid consequent delays.

As an illustration of the actual increase the following figures are submitted:

	<u>8/30/46</u>	<u>8/30/47</u>
Outgoing Long Distance	140-180 Daily	160-210 Daily
Meter Readings Group 1		
Locals 200	650 Daily	900 Daily
Attendant trunks	150 Daily	195 Daily
Central Office Trunks	200 Daily	225 Daily

Throughout the year the personnel of this office has consisted of four full-time and one relief operator. The office operates six full days a week.

We need an additional switchboard to handle the increased number of local telephones which have been put into use, but are connected to existing lines. This involves additional space, as our existing facilities are not large enough to accommodate the additional equipment needed. A major change in the physical building is necessary.

Messenger Service

This department functioned well during the year with the addition of one full time helper. Two people can adequately and efficiently handle the present work load of this department.

Surplus Property

With the establishment of the Federal Works Agency and the State Educational Agency as donors of surplus property for educational institutions we moved to set up a Surplus Property Department at the University. Mr. Hugh Wright was named Coordinator of this department. His principal duties were to:

- a. Obtain requests for equipment from Departments
- b. Acquire surplus property
- c. Screen all catalogues of surplus property
- d. Keep departments acquainted with the availability of property.
- e. Arrange the shipping of property, the receiving, and distribution to departments of surplus equipment
- f. Maintain University contact between Federal Works Agency, War Assets Administration, State Educational Agency, Army and Navy
- g. Keep records, regulations and correspondence.

Much of the receiving and distribution of surplus property was coordinated with the activities of the Stores Department.

During 1945-1946, the University received a total of \$274,342.02 from surplus donations while the year of 1946-1947 produced \$475,294.92 of surplus property for which we paid \$15,388.14.

Present indications depict the gradual termination of the national surplus program around the end of the calendar year. Our efforts will be to get as much useable material and property as possible before the close of these various programs.

MANAGEMENTContracts

Research projects under contract during 1946-1947 amounted to a total of \$1,637,679.00. Excepting for one contract, all were initiated in 1946. This is more than double the amount for contract negotiated up to August 31, 1946, when the total reached \$817,817.00 and covered a five year period. Many of the original contracts have been amended to continue into 1948-1949 and of this past year's total, approximately \$601,699 will be carried over into that period.

There were seven contracts with Air Materiel Command, two of which terminated as of August 31, 1947, and six are currently in operation with other branches of the War Department, totaling \$516,216. Contracts with the Navy Department, Office of Naval Research, number eighteen and amount to \$1,009,488. We have just executed a sub-contract under the Navy with Litton Engineering Laboratories. Overhead allowances total \$336,908.

We have three contracts in operation with the National Advisory Committee for Aeronautics. Professor E. G. Reid's contract begun in 1945, is being extended with an added appropriation, altho no definite date of termination has been set. Two new contracts with the National Bureau of Standards have been executed by Stanford and are now being processed by the Bureau. They total \$21,330.

A collation of the contracts by departments shows eleven participating in government research, with the Department of Elec-

trical Engineering leading in total dollar volume followed by the Departments of Physics and Chemistry.

Stanford has also entered into contractual agreements with the State of California, Division of Fish and Game, and with the Department of Education, Maritime Academy, during the past year. Two agreements with the Director of Agriculture acting through the Wine Advisory Board are awaiting legislative action. We have also executed Borrowed Personnel Agreements with the Regents of the University of California to utilize the consultant services of several Stanford faculty members.

There are four proposals under consideration by the Navy and one by the Air Materiel Command.

In addition to the research contracts, student training contracts with the War Department and the Air Materiel Command (Army Air Forces) during this past year total \$32,994.20. Navy training contracts involving student officers under the Office of Naval Administration, NROTC, Naval Aviation Preparatory Program and the Naval Postgraduate School total \$95,034.47. There are in addition, contracts with the Veterans Administration for training GI's under Public Law 16 and 346.

Insurance

In January of 1947 the National Insurance Brokerage Firm of Marsh & McLennan was named Insurance Broker for the University. Since that date we have been working on our insurance program to streamline and modernize contract forms, to reduce the number of policies, and to standardize coverages.

The firm of Mund, McLaurin & Company was retained for the year to assist the University in working with the insurance brokerage firms on policy conditions, coverage and price.

As the surveys are completed we find that the insurable University owned buildings and contents have appreciated in value. The possibilities of a dollar savings in premiums paid are negligible due to increased values. Every effort will be made to reduce insurance rates, but costs of insurance, I feel sure, will be increased.

Palo Alto Hospital

The Palo Alto Hospital is owned by the City of Palo Alto but is managed and operated for the City by Stanford University. Gross income for the fiscal year ended June 30, 1947, was \$877,780.70. Net profit before interest and bond redemption was \$44,220.98, and after deducting interest and bond charges of \$28,062.50, a net profit of \$16,158.48 was carried to surplus. The average annual occupancy was 103.4% or an average of better than 168 patients a day. Expenses were abnormally high because of increases in salaries and wages of all employees, including the adoption of a new scale for nurses and the reduction of working hours for nurses from forty-eight to forty hours a week.

The following is a copy of the Report of Financial Operations for the Fiscal Year Ending June 30, 1947, along with some general statistics. It is my feeling that these statistics will be of interest to you because of the current hospital problems.

The gross operating income from all sources was	\$877,780.70
And total direct operating expenses	<u>833,559.72</u>
Leaving net income from operations, before fixed charges,	44,220.98
This compares with net income from operations for the	
previous year of	78,304.39
Or a net decrease of	<u>\$ 34,083.41</u>

The net income from operations was distributed in the following manner:

Payment to or accrued for the benefit of the	
City of Palo Alto-	
For interest on the 1931 and 1939 bond issues	\$ 11,812.50
For retirement on serial bonds of the 1931 and	
1939 issues	<u>16,250.00</u>
	\$ 28,062.50
The remaining net profit of	\$ 16,158.48
was transferred to current surplus.	

Current surplus was reduced by the sum of \$11,025.07 covering the cost of additional equipment purchased for surgery, delivery room, nursery, X-Ray, and for general use.

In addition to the above payments and accruals for the benefit of the City for bond interest and retirements, the University paid to the City the sum of \$34,044.64 from Hospital funds, representing accumulated surplus as of June 30, 1946 that was in the form of cash in excess of \$25,000.00 working fund. The University was advised that \$20,000.00 of this sum would be used by the City for current budget purposes, and the balance set aside in the Hospital Improvement Fund.

During the year the salaries of both professional and non-professional employees were increased, and on October 1, 1946, in conformity with the practice adopted by California hospitals, nurses' hours were reduced from forty-eight (48) to forty-four (44) weekly, and on January 1, 1947, were further reduced from forty-four (44) to forty (40) hours weekly. The increase of salaries and reduction of hours has increased the cost of operations by approximately \$107,000.00 annually. As a result of salary and hour changes and a continued rise of commodity prices, room and ward rates were increased \$2.00 daily, effective December 1, 1946.

There was an increasing public demand for beds, the average occupancy for the year being 103.4% with an average of better than 168 patients a day.

Under the City of Palo Alto subsidy plan, which provides a maximum allowance of \$2.50 per day for 21 days of hospitalization for qualified residents of the City, 1795 individual cases received benefits of 10,780 days at a total cost to the City of \$26,951.50.

Uncollectible accounts written off during the year amounted to \$7,486.14, or approximately .8% of the gross income.

Notwithstanding the greater demand for hospitalization, a substantial amount of painting and redecorating of both rooms and furniture were accomplished.

Uncollected Patients Accounts Receivable, before deducting reserves for doubtful accounts, amount to \$67,990.59 as compared with \$54,697.79 in the preceding year. In excess of \$31,000.00 of the total was due for the month of June and a total of \$54,000.00 was less than six months old.

General and Medical Stores represent the invoice cost of supplies on hand at June 30th, supported by physical inventories.

Unexpired insurance represents the unearned premiums on all types of insurance at the close of the fiscal year. The following is a record of insurance carried:

Fire - Buildings and Contents (90%)	\$900,256.00
Fire - Nurses' Cottage and Contents	23,655.00
Elevator Liability.	100M/500M
Owners, Landlords, & Tenants Public Liability	100M/500M
Hospital Liability, also covering False Arrest) \$10,000 to Malicious Prosecution) \$30,000	100M/500M
Boiler Explosion.	50,000.00
Alcohol Bond.	2,000.00
Non-ownership liability on employees' privately-owned automobiles: - Public Liability	50M/100M
Property Damage	5,000.00
Owned Automobile Fire, Theft, F.L. & P.D.: \$50 deductible collision	
Public Liability	50M/100M
Property Damage	5,000.00
Comprehensive Dishonesty, Disappearance and Destruction:	
Dishonesty	60,000.00
Loss of money & securities within premises	4,000.00
" " " " " outside premises	4,000.00
Forgery and check alteration	40,000.00
Workmen's Compensation and Employers' Liability.	

All policies provide loss payable to the City of Palo Alto and the Board of Trustees of the Leland Stanford Junior University, as their interest may appear.

Through the arrangement with the Stanford Medical School we maintained continuous residencies in medicine and surgery throughout the year.

Palo Alto Hospital General Statistics

Staff: James Philip, Manager; Miss G. Enid Hutchinson, Supt. of Nurses; Miss Ann Ford, Surgery Supervisor; Robert A. Powers, M.D., Director X-Ray Laboratory; Alvin J. Cox, M.D., Director of Palo Alto

Hospital Laboratory and Public Health Laboratory; Mrs. Verna Morrison, Dietition.

Visiting Staff: Members of the visiting staff are composed of those members of the Palo Alto Medical Society engaged in active medical practice, appointed annually by the President of Stanford University upon recommendation of the Clinical Committee of the Stanford University Medical School.

Hospital Statistics:

Patients Admitted	<u>1945-46</u>	<u>1946-47</u>
Residents of Palo Alto	2,784	2,988
Non-Residents	<u>4,733</u>	<u>5,884</u>
Total	7,517	8,872
Stanford Students	272	387
Men	1,698	1,987
Women	4,463	5,466
Children	1,356	1,419
Births	1,608	2,216
Deaths	192	196
Patient Days	59,265	61,564
Daily average number of patients	162	168

Operating Room:

Major Operations	1,314	1,474
Minor Operations	1,062	1,618
Eye, Ear, Nose, and Throat	1,019	1,015
Plaster Dressings	146	97
Minor Emergencies	1,590	2,592
Obstetrical Patients	1,601	2,198

X-Ray Department:

Number of Patients	1,806	2,418
Number of Visits	3,737	4,430
Total Units of Service	11,756	15,864

Laboratories:

Laboratory Examinations	30,351	31,359
Autopsies :		
Hospital Cases	19	48

Dietetic Department:

Trays Served Patients	169,327	174,572
Total Number of Meals Served, Patients and Staff	220,755	235,084

Real Estate

During the fiscal year September 1, 1946 to August 31, 1947, the following real estate transactions were handled through the Business Office:

a. Sale of Property owned by the University:

<u>Location</u>	<u>To Whom</u>	<u>Amount</u>
Golden Gate Ave. & Broderick, San Fran- cisco (Received from Lotta P. Rossier Estate)	Florence Crittenton Home	\$17,500.00
Hillock Drive City of Los Angeles (Received from F.W.Bergstrom Estate)	Wilshire Escrow Company	217.40
585 Salvatierra St. Stanford Campus (Received from F.W.Bergstrom Estate)	Phillip G. and Esther H. Duffy	5,200.00 \$22,917.40

b. Acquisition of Property:

<u>Location</u>	<u>From Whom Acquired</u>	<u>Amount Appraised</u>
Hillock Drive City of Los Angeles	Gift from F. W. Bergstrom Estate	\$ 200.00
San Clemente (Lot) Orange County, Calif.	" " "	500.00
Oakland (Lot) Alameda County, Calif.	" " "	500.00
Improved Property 585 Salvatierra St. Stanford Campus	" " "	3,500.00
Improved Property 567 Randolph St. Pomona, Calif.	Gift from Carl P. Gould Estate	6,000.00 \$ 10,700.00

c. Loans:

	<u>Amount</u>	<u>Term</u>	<u>Purpose</u>
Carl B. and Sheila Spaeth	\$ 7,500.00	4yrs - 10 mos.	Purchase of Harlan Adams House

Business Manager

	<u>Amount</u>	<u>Term</u>	<u>Purpose</u>
Wm. F. and Janet Talbot	\$ 7,500.00	10 years	Purchase of Lutz House
Phi Sigma Kappa Nu Deuteron Chapter	2,526.14	17 months	Alterations
Theta Delta Chi Eta Deuteron Alumni Assoc.	4,000.00	7 years	Alterations
Alpha Delta Phi	5,000.00	6 years	Alterations
Donald W. and Ruth S. Taylor	3,000.00	10 years	Purchase of Briggs House
Phi Kappa Sigma Bldg Fund	2,200.00	2 yrs.2 mos. after present loan paid off	Alterations
Clarence H. and Gladys Lang Faust	7,500.00	15 years	Purchase of Van Sooy House

Total \$ 39,226.14

d. Transfers of Campus Residences:

<u>From</u>	<u>To</u>	<u>Location</u>
Mrs. C. V. Taylor	Adolph J. Bartky and Ruth Ashworth Bartky	562 Gerona Road
Ralph H. Lutz	William F. Talbot and Janet Talbot	541 San Juan
Francis W. Bergstrom Fund	Philip G. Duffy and Esther H. Duffy	585 Salvatierra
Albert C. Schaeffer & Caroline M. Schaeffer	J. N. Goodier and Marina Goodier	506 Mayfield
Thos. A. Bailey and Sylvia Bailey	Donovan H. Young and Elizabeth F. Young	591 Salvatierra
Mrs. Wm. D. Briggs	Donald W. Taylor and Ruth S. Taylor	522 Mayfield
Neal Van Sooy and Martha S. Van Sooy	Clarence H. Faust and Gladys Lang Faust	536 Gerona Road
Elizabeth Brand Taylor	Herbert H. Dougall and Louise Alice Dougall	635 Salvatierra

Business Manager

<u>From</u>	<u>To</u>	<u>Location</u>
Harlen M. Adams and Lois C. Adams	Carl B. Spaeth and Sheila Spaeth	607 Gerona Road
Holsti, Mrs. Rudolf	Donald G. Reuter and Helen E. Reuter	611 Salvatierra

e. Renewal of Campus Residential (Ground) Leases:

			<u>Annual Rent</u>
A. J. & R. A. Bartky	562 Gerona Road	20 yrs	\$100.00
H. E. & L. A. Dougall	635 Salvatierra	"	50.00
L. I. Nagel & A. N. McDowell	676 Mayfield	"	100.00
Harry Weiggs Wolter	692 Mirada	"	100.00
Stanford Alpha Delta Phi	569 Lasuen	1 yr	100.00
Beta of Alpha Kappa Lambda	568 Salvatierra	1 yr	100.00
Delta Upsilon Assoc.	540 Salvatierra	"	100.00
Phi Kappa Sigma Building Fd.	592 Alvarado	"	100.00
Tau of Theta Xi Realty Company	717 Dolores	"	100.00
Alpha Sigma Phi	534 Salvatierra	"	100.00
Japanese Students Assoc.	714 Santa Ynez	"	100.00
Calif. Beta House Assoc.	538 Lasuen	"	100.00
Chinese Students Club	528 Salvatierra	"	100.00
J. Hugh Jackson	445 El Escarpado	20 yrs.	100.00
James W. McBain	571 Foothill Rd.	"	100.00
The Mu Company (Zeta Psi)	583 Lagunita Drive	1 yr	100.00
Charles Langdon White	421 El Escarpado	"	100.00
Joseph D. Taylor	774 Santa Ynez	"	100.00
Dr. Russell V. A. Lee	440 Gerona Road	20 yrs.	400.00
Phi Gamma Delta House Assoc.	560 Lasuen	1 yr	100.00
John W. Dodds	450 El Escarpado	20 yrs	100.00
Geo. Sutton Parks	665 Alvarado	20 yrs	50.00
Boynton Morris Green	691 Salvatierra	"	50.00
Charles Moser	441 Gerona Road	"	100.00
Delta Upsilon Assoc.	540 Salvatierra	1 yr	100.00
Total for year			\$2,650.00

f. Miscellaneous Leases:

Stanford Riding School (Allen & Patti Ross	1 yr	--
Stanford Research Institute (Rms. in Physics Bldg.		\$ 720.00
U.S. Post Office Dept. Stanford Post Off.	1 yr	1800.00

James A. Work	747 Santa Ynez	1 yr	\$ 1,200.00
John McClelland	No. Stanford		
	Weekend Acres	1 yr	420.00
U.S. Dept of Interior			
Fish & Wildlife Service	Jordan Hall	1 yr	540.00
" " " " "	Museum Rotunda	1 yr	384.00
" " " " "	Transfer of Goods		
	from street to		
	Rm. 450-B,		
	Jordan Hall		Varies
Peninsula Community			
Hospital	Carmel Property	1 yr	3,000.00
Calif. Fish & Game Com-			
mission	Hopkins Marine		
	Station	1 yr	120.00
Emil Mayer & Alfred	San Joaquin		
Baldocchi	County Farm	1 yr	<u>7,500.00</u>
Total for year \$15,684.00			

g. Palo Alto Farm Leases:

<u>Lessee</u>	<u>Property</u>	<u>Term</u>	<u>Rental Per Year</u>
Robt. I. Herndon	1.61 acres of Lot 97	1 yr	\$ 50.00
Ah Foo & Low Yee	10 acres of Lot 35	1 yr	1,250.00
S. W. Campbell	11.48 acres of Lot 103	1 yr	114.80
Joe C. Cardoza	240 acres of Lot 86	1 yr	1,200.00
A. M. Escobar	172.82 acres of Lot 81	1 yr	864.10
Jasper W. Paulson	87.06 acres of Lot 42	1 yr	652.95
Merch Winter	18.7 acres of Lot 105B	1 yr	187.00
Eliot Blackwelder	5.73 acres of Lot 29	1 yr	34.38
P. A. Rod and			
Gun Club	43.59 acres of Lot 49	1 yr	326.93
Joe Verissimo	66.65 acres of Lot 35	1 yr	366.60
Fred Frehe	10.6 acres of Lot 15	1 yr	63.60
Walter Jelich	22.304 acres of Lot 108	1 yr	223.04
John Low & Stan-			
ley Joe	8 acres of Lot 30	1 yr	1,000.00
J. J. McNamara	213 acres of Lots 19, 21,		
	22, 28, 41	9 mos.	(20% Gross)
			Val. Flax Crop)
Fletcher W. Streck	39.791 acres of Lot 30	8 mos.	198.96
Donald B. Tresidder	16.6 acres of Lot 13	5 yrs	100.00
Manuel Piers	1091.52 acres of Lots 36,		
	56B, 56C, 57, 58, 59, 60, 61,		
	62, 64, 65, 66, 67, 68, 69, 70,		
	74	Various	5,407.60
Robert E. Kershaw	8.69 acres of Lot 83	1 yr	480.00
E. W. Redetzke	18.87 acres of Lot 79	1 yr	688.05
A. M. Van Epern	.389 acres of Lot 76	1 yr	1,200.00
Fred Frehe	4 acres of Lot 14	1 yr	24.00
Menlo Oil Stn.	3.03 acres of Lot 76	5 yrs	1,620.00 (Min)
Shell Oil Co.	.63 acres of Lot 15	5 yrs	3,600.00 (Min)

<u>Lessee</u>	<u>Property</u>	<u>Term</u>	<u>Rental Per Year</u>
Peninsula Creamery	148.16 acres of Lots 3, 4, 5, 6, 7, 8, 15	1 yr	\$ 3,887.00
Peninsula Creamery	73.12 acres of Lots 9, 10, 11	1 yr	365.60
Peninsula Creamery	38.59 acres of Lots 6, 7, 11	1 yr	192.95
Jos. E. Galantine	362.15 acres of Lots 42, 43, 44, 45, 47, 48, 49	5 yrs	3,134.00
K. W. Davey	28.24 acres of Lots 98, 99	1 yr	282.40
Eliot Blackwelder	5 acres of Lot 29	1 yr	62.50
			<u>\$ 27,576.46</u>

The Business Office is working on the basis of fewer and more responsible tenants for the farm properties. During 1947-48 you will notice a definite shift in the number of our farm leases.

We are organizing quarterly meetings of our Business Office Staff, Tenants, and County Farm Advisors to discuss problems of mutual interest, in an attempt to improve our lands, tenant relations, and mutual understanding of each others' problems.

In addition to meetings, it is hoped that additional information can be developed on the soils of our San Mateo County property. We have a complete soil classification of the farm properties in the Santa Clara County and have experimented in flower raising and dry farming.

h. Miscellaneous Lease Transfers:

Transfer of Menlo Oil Station Lease from J. S. and Ethel Rising to Cook's Oil Company.

Negotiations with Elsa Uppman Knoll, resulting in her removal of all buildings, fences, trade fixtures and improvements which she installed on tract of 1.59 acres in Lots 9 and 10; she vacated the property as of August 1, 1947.

i. Rentals:

8 former Sorority Houses and 2 Women's Residences were rented to summer tenants during summer of 1947 (July and August) at a total gross rental of approximately. . . . \$ 5,000.00

Interdale: 13 units rented at an approximate total annual rental of. 5,200.00

The Hacienda: 17 units rented at an approximate total annual rental of. 8,400.00

The Knoll: 11 units rented at an approximate total annual rental of. 3,950.00

Garages: 37 campus garages rented - total rental
 for year approximately \$ 1,665.00
\$ 24,215.00

Estates and Trusts

New wills received during the year:

Charles A. Edenburn	Kathryn D. Ritchie	Edith Harbison Hinkle
Henry Savage	Miles W. Kresge, Jr.	Isobell M. Crane
Irene B. Dernham	Elsie Wilcox	Frona E. S. Colburn
Walter Schilling	William C. Fink	Robert W. Wilcox
Frances A. LaMontagne	Raymond R. Griffin	Louetta G. Love
James Irvine	Sara Morris Stowell	Ameilia Levinson Gates
Josephine S. Bendheim	Ann Elizabeth Morris	

Trusts:

James Michael	M. F. Michael
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Distributions received from estates and trusts:

Claude Clifford Ryder Estate	\$ 18,522.63
Hugh Kelly Estate	2,000.00
Frances Morgan Swain Miller	10,119.62
Mary Brooks Eyre Estate	7,000.00
Louis H. Knoche Estate	2,000.00
May Stephens Chartier	988.02
James W. Coffroth Estate	600.00
Sara Anne Haile Trust (income)	11,050.06
Lionel Marius Maurice Estate	157.90
Carl P. Gould Estate	25,583.43
Irene B. Dernham	Real Estate*
Mary D. Barber Estate (Assets of Trust Fund (merged with general (investment assets of (University	25,000.00
	36,365.00
Francis W. Bergstrom Estate	21,301.70*
	\$ 160,688.36

* Does not include proceeds from sale of house,
 reported elsewhere)

. Principal held by others for benefit of Stanford:

Francis M. Shook Trust	\$ 38,102.46
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MISCELLANEOUS

Interdale

The University converted the former Interdale School into additional housing units. There are thirteen families now occupying the premises.

The Hacienda

The University purchased and operated the Hacienda the last half of the year. Single graduate students, teaching assistants, and married couples occupy the quarters.

Additional Buildings (Gift of Federal Works Agency)

Under date of May 16, 1947, the Federal Works Agency, Bureau of Community Facilities, transferred to the Board of Trustees three temporary buildings to be used for additional library space, reading rooms, offices and veterans guidance center facilities.

The Federal expenditures on this project amounted to a total of \$77,280.00. The total square footage amounted to 20,612 square feet.

SUMMARY

To summarize - the year 1946-1947 has been an interesting and trying one. The devotion to duty of all employees of the Business Staff was outstanding. I believe we are making progress. It has been a pleasure working with you and your staff.


ALF E. BRANDIN
BUSINESS MANAGER

UNIVERSITY LIBRARIES

There was little if any improvement during the year with regard to personnel. The higher salary scales prevailing in other libraries in this area and the shortage of trained librarians made it necessary for us to fill many professional positions by the appointment of untrained and inexperienced workers. In spite of this situation we were able to maintain our normal services. This was made possible only by the loyalty and industry of the entire staff.

A survey of our library resources and services was made in November 1946 by Dr. Louis R. Wilson and Dr. R. C. Swank.

The Director gave three courses, i.e., 1 - Simplified Cataloging, 5- Use of Reference Books, and Chemistry 180 - Chemical Literature and Libraries. The latter course is given in alternate years under the auspices of the Department of Chemistry.

The University Libraries had 475,037 volumes on August 31, 1927. In two decades the net increase was 560,698 volumes and on August 31, 1947, the total was 1,044,735 volumes.

This is a remarkable growth. The accessions in large part consisted of basic research material and included many notable files of scholarly journals.

DIRECTOR'S OFFICE

Louise Maier, Secretary

Irene Barquist, Assistant Secretary

The staff handled the inter-library loans, the issuing of stack permits and the preparation of orders.

INTER-LIBRARY LOANS

Volumes lent:

To other libraries.....991

To Hopkins Marine Station Library..... 16

To Lane Medical Library..... 48

Volumes borrowed:

From other libraries.....463

From Hopkins Marine Station Library.... 9

From Lane Medical Library..... 68

SPECIAL COLLECTIONS

Jeannette M. Hitchcock, Keeper of Rare Books

The Keeper of Rare Books attended the sixty-sixth conference of the American Library Association in San Francisco, June 28 - July 5, 1947.

ALBERT M. BENDER ROOM

The staff of two continued to administer the Drama Collection, the Charlotte Ashley Felton Memorial Library and the Elmer E. Robinson Collection, as well as the Albert M. Bender Room (Rare Book Room).

A printed leaflet concerning the regulations relating to the use of material in the Albert M. Bender Room was issued and distributed to readers.

The special collections were used by 5,180 readers of whom 204 used the film reading machines. New equipment included a typewriter, a humidity controlled steel cabinet for the storage of films and an exhibition case.

The following exhibits were made: Stanford University Bookplates, Early American Thanksgiving Sermons, Christmas Books, A Memorial to Albert M. Bender, and Prints Relating to Early San Francisco.

In addition three exhibits were prepared for the main corridors of the University Library: Christmas Books, A Memorial to John Henry Nash and Frederic William Goudy.

Items were sent to the San Francisco Public Library for inclusion in the exhibit sponsored by the Book Club of California in honor of George Sterling and Ina Coolbrith.

CHARLOTTE ASHLEY FELTON MEMORIAL LIBRARY

This collection has been further developed by the addition of numerous items within the scope established by the founder including a selection of the works of contemporary writers.

ELMER E. ROBINSON COLLECTION

Judge Robinson continued his generous contributions to the collection of research material relating to American history which now promises to become a very important part of our resources.

STATISTICS

Volumes cataloged:

Accessions (Rare Book Collection).....	33
Accessions (Typographical Collection).....	66
Accessions (Greenland Collection).....	30
Accessions (Charlotte Ashley Felton Memorial Library).....	1
Accessions (Elmer E. Robinson Collection).....	14

Cards prepared:	Printed	Mimeographed	Typed	Total
Albert M. Bender Room.....	719	43	42	804
Charlotte Ashley Felton				
Memorial Library.....	33	4	8	45
Elmer E. Robinson Collection.....	58	-	4	62
	<u>810</u>	<u>47</u>	<u>54</u>	<u>911</u>

*Temporary typed cards prepared:

** Albert M. Bender Room.....	306
*** Charlotte Ashley Felton Memorial Library.....	614

HOPKINS TRANSPORTATION LIBRARY

Melvin C. Oathout, Librarian

Arrangements were made to keep the Transportation Library open evenings between seven and ten o'clock. The assistant in charge also provided service to readers who wished to use material in the drama collection.

An exhibit relating to the San Francisco cable cars was made in the main corridors of the University Library.

During the year important steps forward were taken in organization and procedure. The acquisition policy has been clarified and the resources of the library examined in detail with a view to filling important gaps.

The processing of material has continued at a rapid rate. The addition to the staff of a part-time typist has permitted the librarian to devote a greater part of his time to cataloging and reference work.

* Duplicate sets of printed and mimeographed cards were made for the general card catalog.

** 275 temporary cards were also made for the general card catalog.

***614 temporary cards were also made for the general card catalog.

The use of the library has been increased by a closer cooperation with departments of instruction most likely to be interested in its research facilities.

STATISTICS

Accessions:	Titles	Volumes
By purchase.....	136	250
By gift.....	54	128
Total.....	190	378
Cataloged:	Titles	Volumes
Books.....	649	764
Pamphlets.....	1977	2060
Periodicals.....	38	74
Recataloged.....	198	635
Cards prepared:		
Printed.....	2,738	
Mimeographed.....	2,282	
Typed.....	160	
Total.....	5,180	

Mail received - 6,060 pieces.

BIBLIOGRAPHY DIVISION

Alice Charlton, Chief

Considerable progress was made in cataloging various extensive collections including the Kathleen Norris gift, the Hoyt Hopewell Hudson Collection and the Dante Collection.

The Hutton Webster Collection has been cataloged with the exception of about one hundred titles.

Miss Craig completed the cataloging of a large collection of German theses from the Flügel Collection.

The services of an expert Russian cataloger for six weeks made it possible to catalog some of the accumulated Russian material.

The services of a full-time Russian specialist are urgently needed.

The card catalog needs additional equipment each year. If circumstances do not permit an appropriation adequate to provide space for at least ten years growth, an annual allotment should be made to cover this requirement.

Copy for 178 titles (34 in the University Library and 144 in the Hoover Library) was sent to the Library of Congress for the Co-operative Acquisitions Project.

The total number of volumes cataloged was 30,015 of which 5,182 were for the Hoover Library and 911 for the Cubberley Library.

Recataloging included 748 volumes for the University Library, 17 volumes for the Hoover Library, and 357 volumes for the Cubberley Library.

The number of serial volumes returned from the bindery for cataloging was 1,242.

Card prepared totaled 108,038 as follows:

University Library.....	69,178
Hoover Library.....	28,628
Cubberley Library.....	4,634
Graduate School of Business Library.....	2,256
Food Research Institute Library.....	435
Hopkins Marine Station Library.....	153
Branner Geological Library.....	163

Engineering Library.....	1,953
Miscellaneous.....	638
Shelf-list cards prepared included the following:	
University Library.....	14,432
Hoover Library.....	11,186
Cubberley Library.....	880
Miscellaneous.....	1,498

CIRCULATION DIVISION

Fred J. Priddle, Chief

The Circulation Division was in operation eighty-two hours a week while the University was in session and forty-three hours a week between quarters.

A small reserve book collection was set up at Stanford Village.

The total circulation was 444,353, an increase of approximately 100,000 over the previous year. This included 196,765 at the Loan Desk, 215,614 in the Reserve Book Room and 1,974 at Stanford Village.

The cost per unit of circulation at Stanford Village does not seem to justify its continuation.

The seating capacity of the Reserve Book Room was increased by the addition of twenty-five class room chairs.

Book repairs in the division totaled 1,050 volumes.

More than 600 readers (not including faculty members) have stack permits.

The facilities for readers in the stacks consist of fifty chairs and tables. This is obviously inadequate.

An increase in the number of cubicles for the use of graduate students and in the number of chairs and tables in the stacks is urgently needed.

DOCUMENT DIVISION

Selma Sullivan, Chief

The collection of United Nations material started last year is now fairly complete. It duplicates the Hoover Library collection, but is available for the use of undergraduate as well as graduate students.

Many de-classified United States documents are now being received.

Documents received:

United States.....	41,904
Foreign.....	18,015
State and municipal.....	23,214
Total.....	83,133
Cards typed and filed.....	4,885

ORDER DIVISION

Edith Falconer, Chief

The net accessions were 39,199 volumes. This is the largest annual increase in the history of the University. The total number of volumes in the University Libraries at the end of the academic year was 1,044,735.

Included in the accessions were 194 volumes presented by Mrs. David Canfield, 375 volumes presented by H. E. Clayburgh, 327 volumes presented by Michael L. Lebenbaum and 1,719 volumes presented by Mrs. Charles G. (Kathleen) Norris.

The following tables show the growth of the libraries during the year:

Stanford University Library

Volumes in University Library, August 31, 1946.....	710,507
Added by purchase.....	6,822
Added by gift and exchange.....	14,311
Added by binding.....	1,340
Total volumes added.....	22,473
Less volumes withdrawn.....	495
Net increase.....	21,978
Volumes in University Library, September 1, 1947.....	732,485

Hoover Library

Volumes in Hoover Library, August 31, 1946.....	128,816
Added by purchase.....	9,639
Added by gift and exchange.....	3,927
Added by binding.....	209
Total volumes added.....	13,775
Less volumes withdrawn.....	564
Net increase.....	13,211
Volumes in Hoover Library, September 1, 1947.....	142,027

Lane Medical Library

Volumes in Lane Medical Library, August 31, 1946.....	108,013
Added by purchase.....	357
Added by gift and exchange.....	861
Added by binding.....	1,039
Total volumes added.....	2,257
Volumes in Lane Medical Library, September 1, 1947....	110,270

Law Library

Volumes in Law Library, August 31, 1946.....	58,200
Added by purchase.....	1,084
Added by gift and exchange.....	383
Added by binding.....	291
Total volumes added.....	1,758
Less volumes withdrawn.....	5
Net increase.....	1,753
Volumes in Law Library, September 1, 1947.....	59,953

REFERENCE DIVISION

Joseph A. Belloli, Reference Librarian

There was a substantial increase in the work of the Reference Division due to the increased registration and to changes in procedures which necessitated considerable clerical work and relocation of collections.

The excellent service which was provided to readers was made possible by the cooperation of the entire staff including student assistants.

An earnest effort was made to get the binding of serials upon a current basis.

The library administration has been in a difficult position with regard to binding during the war and the post-war period.

There was constant pressure upon the part of faculty and students for an improvement in the situation resulting from the accumulation of arrears. At the same time no arrangement could be made to have any of the binding done by outside firms and the University Press was unable to care for more than a minimum of rush orders. The Director of Libraries was fully aware that this was the result of a shortage both in personnel and materials and that no substantial

improvement could reasonably be expected under existing conditions.

The progress made in this connection during the year was relatively slight. 1,724 volumes were sent to the bindery and 3,026 returned.

Consideration has been given to the possibility of microfilming current newspapers instead of binding them.

American libraries have been somewhat precipitous in departing from established practices under the lure of new technological devices which promise economies more apparent than real.

It is obvious that newspaper files are space-consuming, but so are journal files and the book collections.

The proper use of microfilms in a library would seem to be the reproduction of material unavailable in its original form.

Any policy which leads to extensive destruction of original newspapers, documents, etc. and replacement by microfilms will be regretted.

The comparative costs of binding and shelving newspapers and microfilming, microfilm storage and reading machines have not been determined conclusively so that a policy can safely be adapted at this time.

A storage stack for seldom used material would be a much better solution of the space problem.

New routines in the handling of current serials and the administration of the serial collections brought about a much improved service to readers and a greater degree of efficiency in the operation of the serial section.

An arrangement made between the Circulation Division and the Reference Division has brought all of the scattered newspaper files into two locations, i.e., the newspaper room and the first stack level. This facilitates their use and control.

The current subscription list was increased by the placing of 126 new subscriptions.

There has been an increase in the use of the Stanford Collection due in part to the revision and development of the card index. The exhibits of Stanford historical material attracted considerable attention and favorable comment.

General exhibits included:

Western Books of 1946. Courtesy of the Rounce & Coffin Club, Los Angeles.

Selected Botanical Books and Journals from the Bequest of Dr. Herman Knoche.

Christmas Books from the Albert M. Bender Room.

Spiritual Emphasis Week: An Exhibition of Rare Books in the field of Culture and Religion.

Academic Hoods Representing Honorary Degrees Received by Chancellor Wilbur.

Newspapers of Stanford Interest.

"America Sails the Seas." From the Hopkins Transportation Library.

Stanford University Press Publications. (A.L.A. Conference in San Francisco).

A Memorial to John Henry Nash and Frederic William Goudy.

Western Books of 1947. Courtesy of the Rounce & Coffin Club, Los Angeles.

French Costume Plates.

BRANNER GEOLOGICAL LIBRARY

Kathryn Nell Cutler, Assistant Librarian

The following important works were acquired by purchase:

Born, Ignaz. Testacea Musei Caesari Vindobonensis.
Vindobonae, Sumptibus J. P. Kraus, 1780.

Buonanni, Filippo, ed. Rervm naturalivm historia nempe
qvadrupedvm, insectorvm, piscivm, variorvmque marinorvm
corporvm fossilivm plantarvm exoticarvm ac preassertim
testaceorvm existentivm in Mvseo Kircheriano... Romae, in
typographio Zempelliano, MDCCCLXXIII - MDCCCLXXII. 2 v.

Lister, Martin. ... Historiae sive synopsis methodicae
conchyliorum et tabularum anatomicarum. Editio altera.
Recensuit et indicibus auxit Guilielmus Huddesford Oxonii,
e typographeo Clarendoniano, 1770.

Orbigny, Alcide Dessalines d'. Paléontologie française;
description des mollusques et rayones fossilles. Paris,
G. Masson, 1842-60, 7 Sec. II, t. 1-2 and atlases (2 v.).

Emphasis is being placed upon the completion of foreign
journal sets and the acquisition of complete files of other foreign
journals.

Five new journals were subscribed to:

Annales de géophysique.

Annales de paléontologie.

Geophysics, a journal of general and applied geophysics.

Houille, minerais, pétrole; revue de géologique économique.

The Journal of glaciology.

In addition Mineral notes and news is being received as the gift
of Mr. Levorsen and Pacific petroleum geologist as the gift of the
publisher.

Mrs. John Casper Branner presented six photograph albums be-
longing to President Branner. Five of these relate to Brazil and
one to the San Francisco earthquake. Mrs. Branner also gave two
medals presented to President Branner by the State of Arkansas.

Many foreign publications have been obtained through the efforts
of Mr. Levorsen and other members of the staff. Lt. Col. Hubert G.
Schenck has sent the Reports of the National Resources Section of
the Supreme Headquarters of the Allied Forces in Japan.

Twelve map cases provided by the Geology Department have made
it possible to reorganize the extensive map collection. The
assistance of Dr. Siemon W. Muller in this connection was invaluable.

The map collection was increased by the addition of 297 new
topographic maps.

Except for the United States topographic maps the map collection
is uncataloged. A map index with 181 entries has been prepared.
This index refers readers to the location of maps of particular
areas.

The Assistant Librarian participated in a new course, Geologic
Techniques (Geology 120) Students were required to attend two hours
of lectures and demonstration on geological literature and the use
of the library and to work out assigned problems relating to the
subject. A manual on the use of geological literature is being pre-
pared in collaboration with Mr. LeVern W. Cutler. This will be
mimeographed for distribution at the beginning of the Fall Quarter,
1947-1948.

The completion of these projects and a closer contact with the University Library was made possible by the Director of University Libraries who provided a student assistant for two afternoons a week. The Geology department provided an evening assistant.

The library is now in extremely cramped quarters. The stacks are now so congested that current accessions cannot be properly shelved.

This situation has now become critical and with the increase in current foreign accessions requires immediate attention.

The Branner Geological Library now contains 16,214 volumes of which 460 were added this year (113 by purchase, 178 by gift or exchange, 76 by binding, and 93 by transfer from the University Library)

GRADUATE SCHOOL OF BUSINESS LIBRARY

Edwin T. Coman, Jr., Director

The increased registration presented a problem - how to provide accommodation for 467 students in a reading-room with 180 chairs. This situation was improved to a limited extent by narrowing the aisles and adding tables and 40 chairs.

The library was kept open from 8 A.M. to 10 P.M. Monday to Friday, 8:30 A.M. to 5 P.M. on Saturday, and 1 to 5 P.M. on Sunday.

The endowment funds were increased by the gift of \$1,000 from Mr. S. Waldo Coleman and \$2,500 from Mr. George R. Keast. Gifts of \$150 were received from speakers on the Stanford Business Conference program.

The book collection was increased by the addition of 721 volumes (464 through purchase and 257 by gift). The pamphlet collection now consists of 110,000 of which 4,600 were acquired during the year.

Current subscriptions include 624 journals and eight information services.

The Director of the Business Library served on two committees of the California Library Association and took an active part in the October 1946 and June 1947 meetings.

The Industrial Relations Section, closed during the war, is again in a position to serve faculty, students, and representatives of business.

CUBBERLEY LIBRARY

Margaret S. Wells, Assistant Librarian

The Cubberley Library had a very busy year due to the large enrollment in the School of Education and the Department of Psychology.

The accessions included 150 courses of study, 158 documents, 375 pamphlets, and 2,193 college and university reports.

The circulation was 63,353.

ENGINEERING LIBRARY

Katherine Elizabeth Johnson, Librarian

The major problem, as in the case of all of the University Libraries, has been how to accommodate a student body which has nearly doubled in size that of last year.

An additional table and chairs, together with a large number of class-room chairs were provided. In spite of this there were times when sixty or more students desired to use the library and had to be turned away because the reading room was filled to capacity.

The stack capacity has now been exhausted and the shelving of current accessions results in crowding and a consequent difficulty in administration.

Almost all of the current volumes of journals have been sent to the bindery as well as a collection of approximately 1,500 reports from the National Defense Research Council, Office of Scientific Research and Development and from the Massachusetts Institute of Technology Radiation Laboratory.

Accessions totaled 523 volumes.

HOOVER LIBRARY

Nina Almond, Librarian and Consultant in Research

The close of the academic year 1946-1947 marks the retirement of Miss Nina Almond as Librarian of the Hoover Library to which she has devoted twenty-six years of untiring effort.

The Hoover Library is indebted to her for the position which it holds in the field of historical scholarship.

Mr. Dimitry Krassovsky, Curator of Slavic Collections, resigned at the end of the year to accept a position at the University of California Library in Los Angeles. This is a serious loss. He had an intimate knowledge of the content and organization of the Slavic Collections.

The increasing demand on the staff and resources of the library reached a peak in 1946-1947. The number of graduate students and visiting scholars far surpassed any previous year.

Fifty-six candidates working for advanced degrees at Stanford University did the major part of their research in the Hoover Library of these twenty were candidates for the Ph.D. degree and thirty-six were candidates for the M.A. degree. Fifty-one visiting scholars used library material; of this group forty were candidates for advanced degrees at other institutions and eleven were doing independent research work.

The influx of World War II material continued unabated.

This came by purchase, gift, and exchange. There was a large percentage of duplication which necessitated much preliminary checking before processing.

The reference staff continued to organize a vast amount of books, pamphlets, government documents, etc. for shelving in the uncataloged section of the library. In this connection 1,310 cards were prepared for the main catalog and 3,126 for the supplementary catalogs.

The statistics covering the acquisition of current journals and newspapers show a considerable increase.

Excluding Slavic material, 652 journals were received during the year (245 on subscription and 407 as gifts).

Excluding Slavic material, 192 newspapers were received (87 on subscription and 105 as gifts).

This involved the handling of 16,311 issues of journals and 25,367 issues of newspapers. In addition the recording of back files involved the handling of 4,584 journals and 19,246 issues of newspapers.

In the Slavic Section, 96 journals and 86 newspapers were currently received.

Only 271 volumes were bound due to the situation existing at the bindery.

LANE MEDICAL LIBRARY

Margaret Potter, Chief Bibliographer

The continued support of the California Medical Association and

of individual members of the medical profession has made it possible to build up a reserve fund for use in the acquisition of foreign medical books and journals unavailable during the war.

The circulation was 13,475 and 16,405 volumes were issued for reading-room use.

Loans to other libraries and out-of-town members totaled 918 volumes.

The following statistics show the work of the bibliographers:

Volumes cataloged..... 547

Cards prepared and filed:

Main catalogue.....3,761

History of medicine..... 32

Shelf-list..... 624

Total.....4,417

LAW LIBRARY

Gladys Andrews, Librarian

Preliminary plans were prepared for a new law library. Circumstances did not permit the advancement of this project beyond this state.

The Law Library has not been able to provide adequate accommodations for readers in recent years and its stack capacity has been exhausted as far as efficient shelving of new accessions is concerned.

COLLECTION OF COLONIAL AND EARLY AMERICAN NEWSPAPERS

The most important acquisition of the year was the great collection of colonial and early American newspapers acquired from the American Antiquarian Society.

This purchase was made possible through the generous promise of Judge Elmer E. Robinson to meet one-half of the cost.

The collection consists of approximately 45,000 separate issues including many long runs of important papers constituting what is believed to be the largest collection of its kind in the West.

The possession of such a collection at Stanford University makes it possible to carry on research here in history, economics, and political science which would otherwise be impossible.

Another significant acquisition was the file of 257 bound volumes of the San Diego Tribune acquired by gift from the San Diego Public Library.

This is my final report. During the period of my administration there has been a growth of 120 per cent in number of volumes and the Stanford University Libraries have reached the rank of twelfth among American college and university libraries.

These two decades have seen the erection of the Hoover Library building, the establishment of the Graduate School of Business Library, Cubberley Library, Engineering Library, and the Hopkins Marine Station Library.

The University Library has become a notable repository for rare books and manuscripts. Special collections in this field acquired since 1927 include the Charlotte Ashley Felton Memorial Library, the Timothy Hopkins Memorial Library, the Greenland Collection, the Elmer E. Robinson Collection, the Bender Typographical Collection and hundreds of smaller groups of important research material. These have been noted in my twenty annual reports.

This development of the University's library resources has taken place during a period which included a major depression, and a world war.

I am grateful to the many friends who have contributed to it and to members of the library staff, past and present, who have done much to make the accomplishments of the past two decades possible.

Nathan van Patten

Director of University Libraries

GIFT LIST

UNIVERSITY LIBRARY

Books, journals, and other library material were presented by the following:

Academy of Model Aeronautics; Aeronca Aircraft Corporation; African Air Review; Air Dispatch, Inc.; Air Force Association; Air Line Pilots' Association; Air Transport Association of America; Aircraft Production (London); Alaska Airlines; All American Aviation, Inc.; Mrs. C. G. Allen; George E. Allison; American Airlines; American Christian Palestine Committee; American Enterprise Association; American Friends Service Committee; American Hungarian Federation; American Trucking Association; Frederick Anderson; Association of American Railroads; Douglas Atcheson; Australian Consulate-General; Edward Azhderian; Thomas A. Bailey; Mrs. Arthur M. Barrett; Bekins Van Lines Company; Estate of Albert M. Bender; James W. Benét; Oliver U. Bradley; Braniff International Airways; Mrs. John C. Branner; British Air Line Pilots' Association; Mrs. Michael Brown; M. M. Bullard; A. E. Burbank; James M. Burgess; Burroughs Adding Machine Company; California State Automobile Association; Canadian Air Line Pilots' Association; Mrs. W. M. Carpenter; Charleston and Western Carolina Railway Company; Chicago and Illinois Midland Railway Company; Chicago and Southern Air Lines, Inc.; Mrs. John L. Christian; C. C. Church; City Cafe; Kenneth and Nora Clarke; Mrs. Mary Edith Clifford; Mrs. Leslie Coffin; Edwin A. Cottrell; Consolidated Vultee Aircraft Corporation; Mrs. Charles J. Crary; Sue Curtis.

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Contributions and Acquisitions

The flow of materials which began after the end of the war continued in even larger volume during 1946-47. The areas from which the most notable collections came were: Germany and Austria where, by arrangement with the War Department and the Library of Congress, we were represented successively by John Brown Mason, Louis P. Lochner, Daniel Lerner, and George K. Schueller; the Mediterranean region, where our representative was Charles F. Delzell; Japan, where Lt. Col. Hubert G. Schenck continued to guide our collecting activities actually carried out by Yoshii Higashiuchi, Stanford '37; and China where Mrs. Mary Wright, with the advice and assistance of Professor Arthur Wright, Stanford '35, Pardee Lowe, Stanford '30, initiated and carried out under conditions of great difficulty a remarkably successful collecting program. When Mr. and Mrs. Wright returned to the United States, Mrs. Ann Nash Bottorf took charge of our collecting operations in North China. Thanks to the work of Jan Karski, Josef Garlinski, and others, the Library has greatly increased its holdings in Polish, particularly manuscripts and documentary materials from Polish groups and organizations in exile.

Louis Chevillon and his colleagues Pierre Hepp and Christian Melchior-Bonnet in France; Mrs. Ebba Dalin, Stanford Ph.D. '28, in Sweden; Major and Mrs. Lester Johnsen in Norway; Robert Staermeore in Denmark; Jacques van der Belen, Walter Hasenclever, Moe. L. Swaelus-Godenne in Belgium, Luxemburg, and the Netherlands have added very substantially to our collections from those countries. Three firms with whom the Library has had the most agreeable relations for many years - Grill and Company of Budapest, Libreria Nardecchia of Rome, and Stechert and Company of Paris have obtained periodicals, newspapers, and other publications of great interest and value.

These and other acquisitions have been made possible by the continued generosity of Mr. Hoover, Mr. Jeremiah Milbank, Mrs. Giles Whiting, Mr. Edgar Rickard, Dr. Elmer Thompson, Dr. Dorothy L. Thompson, Mr. Frederick A. Wickett, the Francqui Foundation, the Combined Metals Trust, Mr. and Mrs. Burnett Bolloten, and many others.

Officials of the Army, the Navy, and the Department of State have given the representatives of the Library invaluable aid in many countries.

The following paragraphs will mention certain classes of materials and certain items of special interest that have been obtained from the areas mentioned above.

China

Official publications of departments and agencies of the National Government at Nanking.

Official publications of the Kuomintang party.

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Documents of the Peking government before 1928 and of the Nanking government of 1912 and of 1928 and of the puppet regimes in North and South China during World War II.

Files of over 200 journals of opinion some fragmentary, many complete. The Eastern Miscellany (Tung-fang Tsa-Chih) 1904-1943, and a long file (1850-1941) of the North China Daily Herald.

Publications of Chinese universities and research publications of national and provincial banks.

Publications of the principal guilds of Canton, files of Cantonese papers, and documents of the reforms of 1898, the revolution of 1911.

Files of the principal Communist organ, Liberation Daily from May 1941, the Border Regions Mass Newspaper from May 1944 and earlier Communist publications from 1937.

Communist political and economic pamphlets, textbooks, maps, posters, and some titles in the fields of literature and the arts.

From Formosa, Chinese and Japanese titles relating to the period of Japanese rule and to the period since the liberation.

Korea

The Korean collection is the result of the interest of Lieutenant General Hodge and the kindness of Lieutenant Colonel Rankin Roberts. It includes:

Japanese propaganda since 1935.

Studies of the administration of Governor-General Minami, 1936-1942.

Files of newspapers issued in Southern Korea since the liberation. Surveys of Korean public opinion.

Allied military government press releases and communiques.

Records of the U.S. - U.S.S.R. Conference January - May 1946.

A few newspapers and other materials from the Soviet zone of North Korea.

Japan

The Tokyo office of the Library operated since November 1945 by Mr. Higashinichi under the guidance of Lt. Colonel Schenck has shipped over 200 cases of books, papers, and other materials. Among them:

The memoirs of Prince Konoye.

Files of Kaizo (Reconstruction), Chuo-Koron (Central Review), Contemporary Japan, Oriental Economist Toyo Keizai, complete from 1932; Gaiko Jiho (Diplomatic Review) from 1937; Asahi, 1941-44; incomplete files of Nippon Times, Osaka Mainichi, Yomiuri, and others for the war years and complete files for the post-surrender times.

Publications of the Board of Information, South Seas Administration Bureau, Official Gazette, Horei Zensho (compendium of laws), Toa Kenkyusho; and an extensive documentation is also being obtained of the present military government of Japan and of the organization of the new democratic constitutional regime.

Records of the trials of military criminals.

Publications of the Ministry of Finance, Welfare, Foreign Affairs, and others.

India

Mr. Philipps Talbot of the Institute of Current World Affairs, Dr. A. Appadorai of the Indian Council of World Affairs and Inter-Asian Relations Conference, New Delhi; Dr. Kunzru of the Servants of India, and Mrs. Piroja J. Vesugar of the Tata Foundation have aided in the development of the India collections which include:

Files of newspapers and periodicals covering the period of World War II and since, pamphlets and other literature issued by the Congress party, the Moslem League, Communists, and other groups.

Germany

The materials obtained in Germany have been shipped through the Library of Congress. Not all have yet been delivered. Among the notable items are:

The Archives of the Antikomintern and the Deutsche Kongresszentrale, including phonograph records of Nazi speeches, anti-Communist reports by Nazi agencies, informers and censorship bureaus, materials arranged by topics and countries relative to Freemasonry, Judaism, and like subjects.

The Hans Hinkel papers of the Kulturkammer include private papers and correspondence with Goebbels and shed light on German cultural policies.

The Library is obtaining the unpublished Goebbels diary and the personal correspondence of Hans Fritzsche.

A large propaganda collection of the war years was secured from the Sonder Dienst Seehaus.

The Rote Kappelle collection secured by Mr. Lerner is an interesting documentation of Communist propaganda in Germany, as is that of the Russian-sponsored Free Germany committee.

Files of captured German war documents ranging from general staff army field orders to private diaries containing large series of documents issued by various German intelligence and political agencies.

Important materials from Hauptaussschuss Opfer des Faschismus and from the former Rumanian Embassy in Berlin.

Central and Eastern Europe

Files of newspapers published by the Nazis in various Balkan states.

Serials, pamphlets, and other materials relating to the Austrian Social Democrats and the Dolfuss regime.

Files of the principal Hungarian newspapers for the World War II and during the armistice and the allied occupation.

France

Further materials on the resistance and on contemporary affairs.

Newspapers, periodicals, pamphlets issued by Spanish emigrés in France obtained through Señor Jordi Arguer and Dr. Walter Hasenclever.

The Banc Collection, an exceptionally valuable collection, consisting of 1000 titles relating to French labor and left wing movements since 1917, obtained by Mr. Lerner.

England

The Darling Collection from Mr. E. W. Darling through Mr. Lerner consists of pamphlets, periodicals, books on the Fabians, the Independent Labour Party, the Shop Stewards movement, the Communist party, and other groups.

Materials on the Third, Fourth, and Fifth Congresses of the Comintern, and on the Fourth International.

Ireland

Mr. James Healy continually adds to his collection on the Irish Republic.

Spain

Through Mr. Delzell seventy-five cases on the Franco regime and the Spanish Civil War from the Franco side were obtained.

Extensive newspaper files of Madrid and Barcelona.

Organs of the Falange and Frente de Juventud.

Complete post civil-war parliamentary records of the Spanish Cortes and the Boletín Oficial del Estado. Separatist propaganda from the Basque and Catalan regions.

Complete propaganda and legal section of the former German Kultur Institut in Madrid.

Portugal

Publications of the government ministries were obtained through Mr. Delzell. Also included among the materials were:

Files of newspapers issued during the Salazar regime.

Italy

A comprehensive collection on Fascism, World War II, the resistenza and the organization of the new Italian republic, several thousand books and numerous newspaper and serial files, and the documentation of the Partisan underground were obtained through Messrs. Delzell, Fedor Nemirovsky, and E. L. Immelen.

Greece

Newspapers, pamphlets, and periodicals issued during the German occupation, underground struggle, and civil war were obtained by Mr. Delzell and Mr. Jason Vimbos.

Current newspapers of Athens:- Rizospastis (Communist party), Ellenikon Aima (right-wing), Messenger d'Athènes (neutral), and others.

Governmental publications, parliamentary debates, and official gazettes.

Poland

Official documents, memoirs, newspapers, periodicals, and other

materials relating to the Polish Republic 1919-1939, the resistance, the Polish forces abroad, in Russia, the Near East, Italy, and England have been obtained through Messrs. Jan Karski, Jozef Garlinski, Gen. Golovine, and many other Poles.

The U.S.S.R.

The Library is participating in the cooperative Russian acquisition project organized by the Library of Congress for the purchase of books published in the Soviet Union.

The Library subscribes to seven newspapers and twenty-four periodicals which are being received currently.

The United Nations

Publications and reports issued by the U. N. and affiliated bodies.

Exchanges

The Library has exchanged materials with the following institutions and individuals in foreign countries:

Hungarian Libraries Board, Budapest, Hungary.

Paul Teleki, Danubian Research Institute, Budapest, Hungary.

Institut Universitaire de Hautes Etudes Internationales, Geneva, Switzerland.

Schweizerisches Sozialarchiv, Zurich, Switzerland.

Library of the Hellenic Chamber of Deputies, Athens, Greece.

Miss Jeanne Stephanopolis, Editor, Messenger d'Athènes, Athens, Greece.

Societa Italiana per la Organizzazione Internazionale, Rome, Italy.

Ambrosiana Library, Milan, Italy.

Dr. Vittorio Gabrieli, Rome, Italy.

Dr. C. Pellizzi, Rome, Italy.

Ministry of Foreign Affairs, Belgrade, Yugoslavia.

Bibliothèque Nationale, Paris, France.

American Library, Paris, France.

Czech Library Association, Prague, Czechoslovakia.

Dr. Walter Berger, Ministry of Social Welfare, Prague, Czechoslovakia.

Nationalbibliothek, Vienna, Austria.

Komisja Centralna Zwiskow Zawodowych w Polsce, Warsaw, Poland.

Polish Research Centre, London, England.

Imperial War Museum, London, England.

Frau Paula Schiedeck, Germany.

O Agencia Geral das Colonias, Lisbon, Portugal.

Diario da Manhã, Lisbon, Portugal.

Diario de Noticias, Lisbon, Portugal.

Republica, Lisbon, Portugal.

O Seculo, Lisbon, Portugal.

Ministerio de Agricultura, Madrid, Spain.

Espanol, Madrid, Spain.

Directorate General of Antiquities, Baghdad, Iraq.

Tokyo University of Industry, Tokyo, Japan.

Tokyo Imperial University, Tokyo, Japan.

Bureau of Mongolian-Tibetan Affairs, China.
 Central Political Institute Library, Nanking, China.
 Enping University, Taiwan.
 Inspectorate General of Customs, Shanghai.
 Institute of Social Sciences, Academia Sinica, Nanking.
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 National Library of Peiping.
 National Roosevelt Library, Chungking.
 National University of Yunnan.
 Taiwan Provincial Library.
 China Welfare Fund, Maa. Sun Yat Sen.
 National Taiwan University, Taipei.
 Dept. of Compilation, Hupei Provincial Govt., Wuchang, Hupei.

Gifts Received

Space does not permit a listing of all the valuable materials received during the year. It is possible to mention only some of the items of special interest and the donors to whom we are indebted.

Elaborate documentation, both in original copies and micro-films of clandestine literature and confiscated Fascist materials of the underground struggle in northern Italy, was donated by Dr. I. Lussi, Archivist of the C. V. L., Milan, Italy.

Additional materials of this nature were presented by:

Dr. Riccardo Poli, Secretary of the Partito d'Azione, Rome;
 Dr. Alicatta, Editor of Communist newspaper, L'Unita, Rome;
 Dr. Vittorio Gabrieli, Rome;
 Dr. Randolfo Pacciardi, Leader of Republican Party, Rome;
 Dr. Guido de Ruggiero, professor of history and political science, Rome;
 Dr. Edoardo Volterra, Rector, University of Bologna;
 Mr. Leonildo Tarozzi, editor Communist papers, Bologna;
 Dr. Alessandro Gallante-Garrone, Turin;
 Signora Ada Gobetti, Turin;
 Dr. Mario Borsa, editor, Corriere della Sera, Milan;
 Dr. Massimo Giannini, Ministero della Costituente, Rome;
 Capt. D. Larson, Military Attache Section, U. S. Embassy, Rome;
 Mr. A. S. Annunziata, U.S.I.S., Rome.

Prof. Corrado Gini, Director, Istituto di Statistica, Rome;
 Sr. Livio de Milchiori della Zuanna, Milan;

Prince Gaetani of Rome presented the library additional documents relative to the activities of his late brother, Hon. Gelasio Gaetani, former Italian Ambassador to the United States, and Italian delegate to the Versailles Peace Conference. The Secretaries of the Chamber of Deputies and Senate donated all the official publications of these bodies.

In Greece the Hoover Library is particularly indebted to Miss Jeanne Stephanopoli, editor of Messager d'Athènes, for lengthy files of this newspaper covering the period of the Balkan Wars and from

1937 on.

Hon. Triphon Triantaphlakos, Director-General of the Political Bureau to the Prime Minister, Athens, assembled a large and valuable collection of Greek underground propaganda disseminated during the Nazi occupation.

Prof. Panayotis Kanelopoulos, leader of the "Enotikon Koma" party in Greece, presented a complete edition of that group's underground newspaper. M. Achilles Kyrou, editor of the Athenian newspaper, "Estia," furnished a complete microfilm set of the clandestine issues of that paper.

Don Estéban Bilbano Eguia, President of the Spanish Cortes, presented the complete publications of that body.

For Portugal, extensive files of publications were presented by the Director-Generals of the Ministries of Colonies, Commerce, Labor and Social Security, Agriculture, Industry and Statistics, and by the editors of Diário de Notícias, Republica and other newspapers.

Significant documents regarding the anti-fascist underground in the Netherlands were presented by Hans Hermans, J. LePoole, Th. Bodde, J. J. A. Thoolen, Col. H. J. Schmidt, D. Van Elsas, M. Surie, H. R. Frans, and C. Paap of The Hague; Hendrik Matthys van Randwijk, Dr. J. Borst, Mijnheern van Riessen, Jan de Groot, Gerben Wagenaar, van der Does of Amsterdam.

The Schweiz. Metall- u. Uhrenarbeiter of Bern, Switzerland, presented the Hoover Library with interesting sociological materials. The Union Suisse des Cooperatives de Consommation of Basel sent publications regarding the cooperative movement.

The Library is indebted to the Danish Information Office in New York for additional materials on contemporary Denmark.

The Office of Information and Cultural Affairs of the U. S. Embassy in Belgrade was helpful in forwarding current publications of interest from Yugoslavia.

The French Embassy in Washington has presented valuable materials relating to the French underground.

The Viet-Nam American Friendship Association in New York forwarded propaganda on Indo-Chinese affairs.

The Library is indebted to the following people in Manila for materials on the Philippine Islands: Prof. H. Otley Beyer; Dr. Farcia, Librarian, Malacanan Palace; Dr. Ayers, Adviser to the President, Malacanan Palace; Dr. Bernardo, Librarian, University of the Philippines; Teodoro Agoncillo; Leopoldo Y. Yabes, Dept. of Instruction and Information, Malacanan; Delmacio Martin, Dept. of Education; Dr. Adendato J. Agbayani; Marcello Garcia; Jose P. Santos; Remberto Roa; Basilio Sarmiento; Dr. Jose Villa Panganiban; Dr. Nicholas Quilon; Leon O. Ty; and Mrs. E. Trinidad T. Subido.

In China numerous individuals in private and governmental capacities donated valuable materials. Mr. Han-ch'ao Liang, Deputy Secretary-General of the Supreme Council of National Defense, Nanking, presented his private library of a thousand items which he had collected when he was Minister of Information. Gen. Ch'en Ch'eng, Chief of the Chinese General Staff of the Combined Forces, Nanking, was most generous in making available military publications. A large amount of fiscal and statistical information was given by Dr. Chi Chao-ting, Director of Research Department, Central Bank, Shanghai. Important materials were presented by Dr. Chiang Fu-ts'ung, Director

of National Central Library, Nanking, and by Dr. Yüan T'ung-li, Director, National Peiping Library, Peiping. Mr. Huang Hua, Public Relations Officer, Communist Branch, Executive Headquarters, was obliging in making available Communist materials. An extensive file of the newspaper, Central Daily News, Nanking, was presented by its editor, Mr. Ma Hsing-yuan. Professors Chang Hsi-jou and Kuo Mo-Jo of Shanghai presented many items from their personal libraries.

Officials of the Ministries of Food Supply, Internal Affairs, Mongolian and Tibetan Affairs, Social Affairs, National Defense, Foreign Affairs, Education, Finance, Agricultural Economics, Economic Affairs, Communications, Information, as well as of the Peiping and Nanking municipal governments, Executive and Legislative Yuans of Nanking, Institute of Social Sciences, were all most helpful in making available pertinent materials.

The Office of Naval History in Washington presented all its publications which lie within the field of the Hoover Library.

From the Historical Division of the War Department in Washington, the Library received a complete set of the "American Forces in Action" series (12 volumes).

Mr. Phil H. Stitt of the U.N.R.R.A. in Washington forwarded materials on that organization.

Mr. W. Sidney Aitken of Palo Alto presented a manuscript, "Summary of Interrogation of Gen. Yamashita and other Responsible Commanders and Staff Officers."

The International Committee of the Red Cross, Washington, sent numerous publications of that body.

A collection of reports on public opinion during the war by mass-observation was presented by Mr. J. D. A. Barnicot of the British Information Services, New York.

Sets of propaganda produced by the O.W.I. in Switzerland during the war were donated by Dr. Eric C. Bellquist of the State Department.

Eighty strategic war map charts were presented by Col. E. S. Bettelheim, Jr., of the Military Order of the World Wars, Washington.

Seven volumes of mounted clippings on the Burma campaign, 1942-3, were presented by Mr. Winslow L. Christian of Stanford University.

The Centre de Documentation, Juive Contemporaine, Paris, presented its publications.

Sixteen boxes of materials on Nazi Germany were forwarded by Ernest J. Cramer of Information Control Div., 3rd M. G. Regt. APO 170, N. Y.

Various Czech newspapers were donated by Otakar Fischer of Stanford.

Various Argentine and Brazilian publications were presented by C. A. Gould of Rio de Janeiro.

Posters and pamphlets on war-time Norway were presented by Maj. I. Johnsen of the American Embassy in Oslo.

Files of "Yank" were presented by Sgt. Raymond B. Jordan, Fiscal Office, AFWS PAC.

Materials on conscientious objectors was provided by American Friends Service Committee, Philadelphia.

Personal correspondence with Germans during World War II was donated by H. van der Kaar of Hollywood, California.

Numerous books on German history were presented by Samson B. Knoll of Stanford University.

Interesting pennants by Chinese Nationalists were presented by Lt. Col. Kenneth Lau, Peiping Executive Headquarters.

Numerous materials on Far Eastern Affairs were donated by Maj. Merrill Moore, Nanking Headquarters Command.

A collection of Mennonite conscientious objectors' publications was presented by Mr. Harold Moyer of Akron, Pa.

Father H. A. Reinhold of St. Joseph's Church, Sunnyside, Washington, presented a manuscript on the life of his uncle, Dr. Emil Scholz of Langerberg Postlebrin, Austria.

Mr. Lawrence Richey of Washington, D. C., presented a set of the Nuremberg trial papers and other war-time materials.

Mr. Walter Robb of San Francisco presented recordings of his broadcasts to the Philippines during the war.

Materials on the internment camps in the Philippines were donated by Mr. Alvin H. Scaff of Austin, Texas.

Mr. Gunther Stein of Roslindate, Massachusetts, presented two manuscript volumes of his Yenan diary.

Clippings of war-communiques of the New York Times were presented by J. E. Wallace Sterling of Pasadena, California.

Brig. Gen. C. A. Willoughby and Lt. Col. Lee Telesco contributed additional valuable materials on the resistance movement in the Philippines during the Japanese occupation.

Clandestine publications of the Dutch underground were presented by Mr. Manfred Vernon of Stanford University.

Mr. William P. Wreden of Menlo Park, California, presented an interesting collection of Nazi materials.

Mr. Hobart Young of Stanford University presented the valuable Order of Battle of the Japanese Armed Forces (April, 1944 edition).

Library Program

On April 1, 1947, Library hours became as follows:

Monday - Friday: 8:30 a.m. - 10 p.m.

Saturday: 8:30 a.m. - 5 p.m.

The arrangement for evening hours was undertaken in response to increasing demand on the part of scholars using its facilities. Circulation statistics show that 8,894 volumes were made available to readers through the Reference desk. This represents more than a 40 per cent increase over the previous year.

The enormous quantity of materials which flowed into the Library required much preliminary checking to avoid duplication. While many books were obtained on the basis of want-lists compiled by the Librarian, a large part of the materials came through the initiative of the Library's representatives abroad. The Hoover Library's participation in the Library of Congress Project for the Cooperative Acquisition of Recent Foreign Publications was terminated in August, 1947. During the academic year the Hoover Library purchased 3,050 books and 522 periodical units through this project.

The Reference Staff continued to organize a vast amount of government documents, books, pamphlets, and leaflets for shelving in the uncatalogued sections of the Library. In this activity 1,310 cards were typed for the main catalog, and 3,126 cards were typed and filed in the supplementary catalogs.

392. *Hoover Library and Hoover Research Institute*

Statistics for current periodicals and newspapers show an unusual increase. Excluding Slavic, 652 periodical titles were received during the year; of this number 245 were subscriptions and 407 were gifts. This number of periodicals amounts to an increase of almost 100 titles. Again excluding Slavic, 192 newspaper titles were received, 87 of them on subscription and 105 gift. 16,511 current periodical issues and 25,367 current newspaper issues were received, checked and filed. In addition, the organization of back files involved handling 4,584 periodicals and 19,246 newspapers.

In the Slavic Collection 96 periodical titles and 86 newspaper titles were checked in currently. In the organization of the Slavic serials (both current and back files) over 20,000 issues were handled.

The School of Naval Administration Library for the use of officer students was maintained. Over 1,200 copies of books and pamphlets were purchased for the School. These books were in multiple copies for distribution to individual officers or for library use. 887 volumes were withdrawn from the SONA library through the SONA circulation desk.

The Herbert Hoover Archives

Mr. Hoover has made substantial additions to the Archives by the transfer of papers from his New York office.

Dr. Julius Klein has contributed files of newspapers and clippings from Latin America relating to Mr. Hoover's trip in 1946.

Mr. Paul Grosjean of Brussels has sent clippings of articles from European newspapers relating to Mr. Hoover and to his interests and public services.

Dr. Edward F. Willis, head of the History Dept. of the newly organized Jersey City Junior College, returned during the summer of 1947 to continue his research on the history of the blockade during World War I.

A graduate student has used the printed materials in the archive as sources for a master's thesis on the United States' Latin American Policy 1929-1935.

Ray Lyman Wilbur Collection on Social Problems

The Navy Department requested continuation of the School of Naval Administration. It has been necessary, therefore, to use office space and facilities for the Navy program, and on a part time basis the curator's time has been utilized for the administrative work of the School.

The greatest demand from civilian students has been for material of the medical economics unit. Three graduate students have done one or more quarters work on directed reading projects in the Collection.

The curator served as co-director of the Radio Institute offered jointly by NBC and Stanford during the summer quarter. This is reported fully by the Department of Speech and Drama. The Radio Room was set up as a reading room for the students of the Radio Institute. Publications from the Wilbur Collection as well as from other campus libraries were centralized to make reference items more easily accessible.

Additions to the two mentioned units have outnumbered the increases in other parts of the Collection. Gifts have been numerous, but as before Dr. Wilbur and Mr. Hoover have been the principal donors.

Advanced and Graduate Research Courses

The following courses, conducted as seminars, conferences or directed research were offered during the year:

- 214. Directed Reading: Economic Aspects of Public Health and Medical Care. 5 units, autumn, winter, spring, summer quarters. (I. G. Richardson)
- 217. Soviet Foreign Policy. 5 units, winter, spring quarters. (H. H. Fisher)
- 220. Censorship and Propaganda since 1914. 5 units, autumn quarter. (R. H. Lutz)
- 226. Directed Reading: The Media of Mass Communication. (I. G. Richardson)
- 225. Seminar on Peace Settlements. 5 units, winter, summer quarters. (R. H. Lutz, C. E. Rothwell, H. H. Fisher)
- 238. Seminar on Modern Military and Naval History. 5 units, summer quarter. (Lutz, A. E. Sokol)
- 260. Pacific Islands Administration (260, 10 units, fall and spring); (261, 8 units, winter and summer). (F. M. Keesing, H. H. Fisher)
- 267. Seminar on Slavic History. 5 to 5 units, spring and summer quarters. (H. H. Fisher)

School of Naval Administration

The Navy Department requested the Hoover Institute to continue the School of Naval Administration, and two additional classes of naval officers were each given a five-month period of intensive training in Pacific island administration. The course, as before, covered the basic elements of the area's geography and history, the fundamentals of civil administration, and the essentials for understanding the peoples and their customs. The School library and documentary collections on the Pacific islands were greatly augmented during the year, particularly by official reports and other materials from the island administration.

The responsibility for the School program was carried for the University by Harold H. Fisher as Director, and Felix M. Keesing as Associate Director; for the Navy, by Captain Charles E. Crombe, Jr., USN, Professor of Naval Science and Tactics. The staff included four naval officers with experience in Pacific island administration. Approximately fifty guest lecturers with specialized knowledge of history, political science, medicine, education, anthropology, and so on appeared before each class. Ten to twenty men from Class I and from the United States Commercial Company, which handles trade in the Pacific islands area, lectured to the men on their journeys to and from the islands.

Thirty-one men, ranking from ensign to captain were assigned to Class II which started September 25, 1946. All were graduated and ordered to duty variously in Guam, American Samoa, the Carolines, Palau, Marshalls, and Marianas. At the closing exercises on March 20

1947, Dr. Eugene Staley, Executive Secretary of the Institute of Pacific Relations, gave the address. Captain Harold B. Edgar of the 12th Naval District participated in the presentation of graduation certificates.

Class III started April 1, 1947, with twenty-one men, ranging from the rank of ensign to captain. The entire group was graduated August 29. The men were ordered variously to the same areas as the previous class. Dean Knowles A. Ryerson (University of California, School of Agriculture, Davis, California, and a member of the Hopkins Committee) gave the farewell address. Captain Albert G. Cook represented the 12th Naval District.

During March the School played host to the Hopkins Committee sent out to islands by the Navy Department to survey conditions. The officers and civilian staff prepared various materials on Guam and American Samoa for the use of the Committee. The members of the Committee were Dr. Ernest M. Hopkins, President Emeritus of Dartmouth College, Dean Knowles A. Ryerson, and Maurice J. Tobin, former governor of Massachusetts. The School also cooperated with the Pacific Science Board and the Navy Department in connection with the work of various scientists going into the Micronesian area, particularly a party of twenty-four members of the "CIMA" (Coordinated Investigation of Micronesian Anthropology project). This group spent a period at the school in late June and were briefed by the staff as well as being shown films and given access to documentary materials.

In July Dr. Keesing was granted a leave of absence for eight weeks by the University to enable him to accept the invitation of the Trusteeship Council of the United Nations to participate on a Mission visiting Western Samoa in connection with a petition for self-government.

Slavonic Studies Program

A grant from the Rockefeller Foundation has made it possible for the Hoover Institute to award fellowships for research in the Slavic materials in the Library. The purpose of these fellowships is to furnish opportunities for the completion of significant research and for the completion or extension of training for an academic year of nine months. Fellowships have been awarded only to applicants for whose investigations the materials in the Hoover Library offer special advantages. Fellows are members of the Slavic Seminar in which reports on current research are made and discussed.

The President of the University appointed Dr. Merrill K. Bennett, Dean of the School of Social Sciences; Dr. John W. Dodds, Dean of the School of Humanities; Dr. Ralph H. Lutz, Dean of Graduate Study; Dr. E. H. Fisher, Chairman of the Hoover Library; Dr. A. E. Sokol, Department of Humanities; Dr. Easton Rothwell, Vice-Chairman of the Hoover Library; and Dr. E. D. Shaw, Economics Department, as a committee to award the fellowships under this grant.

During the academic year 1946-47 the following have been awarded fellowships under this program:

Christoff, Peter. Subject: The Radical Panslavism of Alexander Herzen and Michael Bakunin.

Eudin, Xenia Joukoff. Subject: Soviet Foreign Policy Since 1920

Gankin, Olga Hess.	Subject: A Documentary History of the Third International.
Mandel, William M.	Subject: Soviet Foreign Policy.
Mohrenschildt, Dimitri von	Subject: Communist Ideology and Strategy Since 1917.
Porter, Livingstone.	Subject: Masatian Sorbs in Modern Times.
Sworakowski, Witold S.	Subject: Poland's Eastern Frontiers as Planned by Paris Peace Conference of 1919.
Tomasic, Dinko.	Subject: Political and Social Development of the Croatian People.
Voyce, Arthur.	Subject: Growth and Evolution of Russian Architecture.
Vucinich, Wayne S.	Subject: U.S.S.R. Relations with Bulgaria and Yugoslavia.

The Tower

Approximately 15,000 people have visited the Tower to view the University buildings and campus. This number includes several large high school groups, as well as visitors during pre-registration weekend in September and Commencement weekend in June, when the building was kept open during extra hours to accommodate almost 1,000 people.

Exhibits

Photographic and documentary exhibits were displayed, either in the regular exhibit rooms or in the entrance rotunda of the library. List of the exhibits is as follows for 1946-47:

- Propaganda materials from the Philippine Theatre in World War II, loaned to the Library by Mr. James P. Farquharson.
- Chinese materials presented to the Library by Major General Robert B. McClure.
- The construction of the Hoover Dam.
- Military occupations of World War II and the postwar period.
- A selection of foreign newspapers currently received by the Library.
- The United Nations Conference on International Organization, San Francisco, 1945.
- Exhibit of Hoover Library publications issued by the Stanford University Press.
- U. S. Signal Corps photographs of the European Theatre in World War II, presented to the Library by Mr. Frederick W. Sammis, Jr.
- U. S. Navy photographs of World War II, presented to the Library by Captain E. J. Steichen through Professor E. G. Mears.

The Carillon

Special concerts were presented by Mr. James R. Lawson, carillonneur, on Easter and Commencement Day.

Resignations and Appointments

At the close of the academic year Miss Nina Almond became Librarian Emeritus after more than a quarter of a century of responsibility for the organization, preservation, and handling of the Library's materials. She came to the Library in 1921 when it was known as the Hoover War Collection and she has had an important part in every phase of its development. Professor E. D. Adams, the first chairman, his successor Dean Ralph H. Lutz, and the present chairman have all depended on her wide knowledge and advice in the acquisition of materials and in all the aspects of policy. A long succession of graduate students and many visiting scholars and members of the Stanford faculty are under great obligations to her for her aid in research. Miss Almond plans to continue her work in bibliographical research. The officers and staff of the Library will continue to look to her for advice.

On August 1, when Miss Almond went on leave, Mr. McLean, the Reference Librarian, became Acting Librarian.

Dr. Dmitry M. Krassovsky, Library Assistant 1925-30, Bibliographer of the Slavic Collection 1930-1938 and Curator of the Slavic Collection since 1938 resigned at the end of the academic year. He has been chiefly responsible in the organization of the Slavic materials and his thorough knowledge of these collections has been of the greatest value to research workers and the staff.

Mrs. Mabel A. Junkert, who joined the staff in 1924 and has served as Secretary to the Chairman since that time, resigned in July 1947. Her loyalty, industry, and knowledge of the records of all the Library's transactions have been of inestimable value to the Chairman, the Librarian, and all members of the staff.

On April 1, 1947, Dr. Charles Easton Rothwell joined the staff as Vice-Chairman and Research Professor. Dr. Rothwell received his B. A. at Reed College, 1924, M. A. at University of Oregon, 1929, and Ph. D. at Stanford University in 1938. He was formerly Instructor of History at Stanford, Assistant Professor of History and Adviser to Men at Reed College, 1939-41. From 1941 to 1946 he was with the Department of State in various capacities, including that of being Secretary General of United States Delegation to the United Nations. Dr. Rothwell joined the Hoover Library after being Senior Staff member of the Brookings Institution 1946-47.

On January 1, 1947, Mr. Charles F. Delzell became assistant to the Chairman. He received his B. A. from Oregon, 1941, his M. A. from Stanford, in 1943, served in the Army in the Mediterranean Theater and after demobilization became Special Representative of the Library in the Mediterranean area 1946.

Visiting Scholars, Faculty, Candidates for Degrees

The following visiting scholars, Stanford faculty members, and candidates for advanced degrees did research in the Library. With their names are given their institutions or departments and topics on which they were working:

Visiting Scholars

Donald R. Campbell	"The Japanese Constitution"	University of California
Rosarah M. Campbell	"The Status of Native States in International Law"	U. C. L. A.
Mrs. Jane Castellanos	"Maternal and Infant Welfare Programs in Latin America"	Mills College
Margaret Chase	"The Communist Party and the People's Front"	University of California
Michael Cherniavsky	"Soviet Opinion of the U. S. 1936-1946 as Expressed in Russian Sources"	University of California
Robert G. Colodny	"Spanish Civil War"	University of California
Patricia Connally	"Allied Intervention in Siberia"	Syracuse University
Frederick Cox	"Foch and Clemenceau"	University of California
Prof. R. H. deMoulin	"Belgian-American Relations"	Liege, Belgium
Constance Donelson	"Socialism in the First World War in France"	University of California
Prof. Vera S. Dunham	"The Revolutionary Period of Soviet Literature"	Wayne University
Helen B. English	"Netherlands East Indies"	Bank of America, San Francisco
Henry A. Ernst	"German Foreign Policy and the Second Hague Conference"	University of Southern Calif.
David Felix	"Allied Foreign Financing in the U. S. in 1915"	University of California
Pamelia S. Finley	"Diplomatic Relations Between the U. S. and the Arab States, 1920-1947"	U. C. L. A.
H. P. Foster	"The Making of the German Constitution of 1919"	Clark College
Maurice O. Georges	"French Political Parties (1870-1900)"	Reed College
Prof. Malbone W. Graham	"Baltica, Balcanica!"	U. C. L. A.
John Greenberg	"Highlights and Methods of Bolshevik Post-revolutionary Policy"	San Francisco
Lawrence H. Harris	"U. S. Opinion of the Ruhr Occupation"	University of California
Marga Hedrick	"The Foreign Policy of Walter Rathenau"	University of California
Wyman W. Hicks	"Japan's Post Surrender Labor Movement"	University of California
David Leslie Hoggan	"German-Polish Relations"	Harvard University
Richard J. Hostetter	"French Socialism During World War I"	University of California

Lowell W. Jackson	"The French Socialists and the Crisis, July 28 to August 4, 1914"	University of California
Mrs. Barbara Jelavich	"German Diplomatic History 1936-1941"	University of California
Huey Louis Kostanick	"Macedonia"	U. C. L. A.
Paul E. Kremser	"Public Opinion and Neutrality in the 30's"	University of California
Lloyd E. Lorentzen	"The Munich Beer Hall Putsch, 1923"	University of California
Richard E. Mulcahy	"Economic Theory of Heinrich Pesch"	University of California
John Wesley Masland	"Local Government of Japan"	Dartmouth College
Anna Marie Munro	"The Role of France in Ethiopia, 1934-1935"	University of California
Howard C. Payne	"Regionalism in World War I"	University of California
Stanley J. Pincetl, Jr.	"Gallieni - His Contribution to the Battle of the Marne in World War I"	University of California
Inez Pollak	"Danube Economics and International Regulation"	Mills College
Bill J. Priest	"Philippine Education, 1941-1946"	University of California
Joachim Remak	"The Russo-German Press War, March 1914"	Columbia University
James N. Rhoades	"Peace Proposals of World War I Prior to 1918"	University of California
Benjamin Sacks	"James Ramsay MacDonald and His Ideas"	University of New Mexico
George W. Seidl	"Chinese Political Reaction to American Foreign Policy (1945-1947)"	University of California
James H. Shideler	"U. S. Labor Politics"	University of California
William L. Spalding, Jr.	"History of the German Social Democratic Party, 1914-1918"	Cornell University
Herbert Steinhouse	"The French Communist Party"	New School for Social Research
Sverre Eilert Støren	"American Economic Development during World War II and Effects Thereof upon Her Foreign Trade"	University of Oslo
Arthur R. Swearingen	"Communism in China"	University of Southern California
Mrs. Ethel Turner	"The Mexican Revolution"	San Francisco
Elizabeth von Selle	"The Re-rising Political Influence of the German Militarists after the Breakdown of the Army in 1918"	University of California
Rees Williams	"Research on Russia for Independent Writing"	

Prof. Edward F. Willis	"The Blockade and Relief of Jersey City Junior Europe, 1918-1919"	College
Nicholas W. Willis	"Russian Policy in Mongolia (1881-1921)"	University of California
Ernst Winkler	"History of the Austrian Republic"	University of California
Rev. Jacques E. Yenni, S. J.	"International Economic Relations in the Light of Catholic Social Theory"	University of California
Eva Zimble	"The Rise and Decline of Austro-Fascism"	University of Southern Calif.

Candidates for Degrees

Doctor of Philosophy:

Mother Florence M. Bourret	"The Gold Coast and the British Mandate of Togoland 1919-1939"	History
Mary P. Chapman	"Latin American Relations with the United States"	History
Charles F. Delzell	"The Anti-Fascist Underground in Italy"	History
Robert C. Elkus	"Constitutional Law of the United Nations"	Law
L. Mark Hamilton	"The English Churches and the War Effort (1914-1918)"	History
William Harrover	"The British Labour Party and the Spanish Civil War"	History
Samson B. Knoll	"Wars and Revolutions in Modern European History"	History
Henry F. McCreery	"German Public Opinion Towards the United States in the First World War"	History
Malcolm Moule	"The Administration of Tanganyika"	History
Pearle E. Quinn	"The National Socialist Attack on the Foreign Policies of the German Republic, 1919-1933"	History
Clarence E. Thurber	"The Development of Economic Planning in the Soviet Union"	Political Science
Tiburcio J. Tumbagahan	"Higher Education and Inter-Education national Understanding"	
Manfred C. Vernon	"Minority Problems"	Political Science
John A. White	"Allied Intervention in Siberia"	History
Richard L. Wysong	"The German Press View of the Russian Revolution, 1917-1923"	History

Master of Arts

Charles E. Allen	"The United Nations Organization"	Political Science
Dean A. Arnold	"Soviet Policy in Korea"	History
Harley E. Barnhart	"Spanish Civil War"	Political Science
Ernest Day Carman	"Brazilian Participation in World War II"	International Relations
Austin A. Chin	"Influence of Russia on the Chinese Communist Party"	History
Robert W. Coonrod	"Lenin's Revolutionary Program of 1917"	History
Alexander DeConde	"Herbert Hoover's Latin American Policy"	History
Elliot Erikson	"The German Socialists 1918-1924"	History
Cary T. Grayson	"Contemporary Russia"	History
John A. Houston	"Argentine-Spanish Trade 1920-1946"	International Relations
Firuz Kazemzadeh	"The Situation Created in the Caucasus by the Russian Revolution"	History
Francis P. King	"United Nations Trusteeship System"	Political Science
Rosemary Loneragan	"Revision of History Textbooks"	Education
Jane McKenzie	"American Policies Toward China's Party Conflict"	Political Science
Robert Q. McKinney	"Micronesia under German Rule, 1885-1914"	History
Frank E. Macpherson	"Latifundia in the Argentine Pampa and its Effects on the Industries and Immigration"	International Relations
G. Richard Monson	"The Latin American States at the San Francisco Conference"	International Relations
Robert C. North	"Soviet Foreign Policy in China"	International Relations
Lyman W. Priest	"French Intervention at Odessa 1918-1919"	History
John B. Richards	"The Steel Strikes of 1919 and 1945"	Journalism
Andrew Rosaschi	"Italian Intervention in the Spanish Civil War"	History
William K. Rummell	"The Saar Basin, 1920-1947"	Political Science
Frederick D. Schneider	"The Fabian Society and the British Empire"	History
Thomas E. Summers	"The Problem of Reparations in World War II"	Political Science
George K. Tanham	"British Press Reaction to the Belgian Surrender, May 1940"	History

William H. Vatcher, Jr.	"Propaganda in the Pacific War"	International Relations
William B. White	"International Peace Through Student Travel"	Education
Stephen S. Wu	"Sino-American Relations During the Second World War"	Political Science
Roger Holmes Wood	"International Protection of Property"	Political Science
James B. Zischke	"The Occupation of Japan, August 1945-August 1946"	History
Benedict K. Zobrist	"The Upper Silesian Plebiscite"	History

OFFICE OF THE DEAN OF STUDENTS

The office of the Dean of Students was created to help coordinate the student activities outside the classroom. In its second year of operation this coordination proceeded at a more rapid pace and the general organization of the office became apparent.

The detailed reports from the chief officers are given on the following pages. While these reports cover the main points of operation they cannot reveal the pressure under which the entire staff worked. The swollen enrollment, the newness of the staff and of the organization, and the lack of sufficient man power would have made a hopeless picture if it had not been for the spirit and willingness of the entire staff. The Registrar's office, to take but a single example, carried an heroic load which included the handling of credentials of the thousands of applicants.

Appropriate liaison between the students and the University administration should be a function of the office of the Dean of Students. In spite of minor difficulties certain advances were made in improving this relationship. A normal, healthy student body will never find all aspects of the operation of a university to their liking and this is especially true in times of rising costs. Protests and complaints of one sort or another are indications of a normal and healthy student body. Indeed, the lack of activity on this front should be a cause for concern.

Student government has long played an important part in the life of the Stanford student. The task of developing and maintaining a strong student government, responsible and representative, must be one of the never completed tasks. While the central student government has many excellent features, it is not at all times as representative nor as responsible as might be desirable. With the large proportion of G.I.'s on the campus and of married students in attendance there is an even larger number of students uninterested in the normal student controlled campus activities. These students are here for study alone and are bending every effort to get their degrees as quickly as possible. The smooth operation of the living groups, including the fraternities, and the proper education of the residents in the living group requires that a student government assume the responsibility for maintaining proper conditions in their residences. While certain clear cut advances were made in the living groups, here again constant attention is required to maintain the best possible conditions.

The Veteran's Guidance Center provided superior vocational guidance for veterans but the plans for offering vocational advice to the non-veteran are still in progress. However, the primary problem in guidance is in the straight educational guidance, that is, helping students determine what courses they may most wisely take. The work done by the advisers is helpful but a more thoroughly organized program of educational advice will serve additional needs. When in full operation, placement tests and other measures will be employed and the results made available to these advisers so that they may advise on a sound basis.

JOHN M. STALNAKER
Dean of Students

CHIEF COUNSELOR FOR MEN

The office of chief counselor for men was created by appointment beginning June 15, 1946, as one of the student personnel services cooperating under the general direction of the dean of students. The work of the office includes interviewing students who have academic, vocational, financial, housing, or personal problems, whether they live in University residence halls, fraternities, or off campus. A special responsibility concerns the selection and training of resident assistants and advisers in campus residence halls and fraternities so that they may be prepared to acquaint the men in their living area with student personnel services and resources of the University which can be useful to students as they meet scholastic and personal problems. These resources include the Veterans Guidance Center, the University Committee on Vocational Guidance, the Student Health Service, University loan funds, the Appointment Service, and consultation or correspondence with University committees on the Lower Division, Scholarship, and Registration; and cooperation with student committees on house government, student activities, pre-registration, etc.

Loans. In 1946-47 short-term loans approved by this office for the Loan Committee numbered 290, amounting to a total of \$23,803.00 according to the report of the Cashier's Office. The average loan was \$82. Because of the very large percentage of men receiving tuition benefits under Public Laws 346 and 16, few long-term loans on tuition were sought. The generous provisions of the University for temporary deferment of board and room fees within a current quarter and the use of student loan funds proved very helpful to veterans who subsistence checks were received some months late. In cooperation with the Stanford Mothers' Club and the Scholarship Committee, the Loan Committee has been able to assist a number of married and single veterans with urgent temporary needs. Numerous married veterans with one child estimate that a bare minimum of \$200 monthly income is necessary for family maintenance. The lowest estimate of monthly living expense given by a married veteran without children was \$150. Several couples intimated that rising prices and their shrinking reserve funds may compel them to give up study for employment after or during next year before completing requirements for a graduate degree. This situation becomes particularly acute when a child is expected.

Housing capacity for single men: Encina, Toyon, and the fraternities. The greatly expanded capacity of men's residence halls and of fraternities is immediately apparent by comparing the total occupancy now with the figures for six years ago. This year Encina has 608 men as compared with 457 in 1940-41, an increase of 151 men. In the same period Toyon has expanded from a capacity of 140 to 287 in 1946-47, an increase of 147 men. The most common room in Encina, formerly a large double, is now assigned to three men. Some rooms on the top floor of Encina are still used as singles, but the former rather large single rooms in Toyon are being used as doubles. The total occupancy of the 24 fraternities has expanded from 688 in 1940-41 to 860 in 1946-47, an increase of 172. These figures bring the total occupancy of University residence halls (Encina and Toyon) and the fraternities to 1755 single men.

With the Stanford Village capacity of 1208 for single men added, the grand total housing capacity used in 1946-47 for single men is 2963. Branner Hall has not been available this year for the use of the men students, being required for the housing of women students. Sequoia Hall has been officially condemned as unsafe for occupancy, and has consequently not been used. For more information on the capacity of Stanford Village the report of the Village resident counselor and his staff should be referred to. He and his staff and the men's counselor co-operate in student housing and personnel services.

During the year the fraternities had a total of 1010 members and pledges in Autumn, 978 in Winter, and 1219 in Spring; an average of 1060 for the year. The number of pledges rooming in the houses in Spring was 144; the pledges not rooming in the houses in Spring were 206; the grand total of pledges listed in Spring comes to 350. This is the fraternities' first year of operation since 1943, the houses having been leased to the University for student housing during the latter part of the war. In Autumn 11 of the 24 fraternities invited 78 non-members to have residence with them; in Winter 10 houses had 36 non-members in them; and 8 houses had 27 non-members in Spring. Several fraternities have built additional rooms and sleeping porches to accommodate more men.

The Eating Clubs. In March of 1947 the membership of the seven eating clubs rooming in Toyon Hall was 94, with 54 members living elsewhere, making a total of 148 in the University. During the year Los Arcos Club was reactivated by the Inter-Club Council with new and expanded membership. The several clubs had the exclusive use of one of the large dining rooms in Encina Commons.

Resident Advisers in the Fraternities. Beginning this year, each fraternity had a graduate student serving as an adviser living in the house. The advisers met at intervals during the year in training sessions with the men's counselor and staff members of the University in order to know the resources of the University and to develop common understanding of the duties of advisers. The men serving the University and the fraternities in this capacity were nominated by the chapters and approved by the University. Their usual remuneration has been room rent in the chapter house as determined by each fraternity. Mature graduate students, chiefly veterans, are available for this important work. The changes in appointments because of marriages and withdrawals to enter employment made much harder the establishment of the project the first year. By the opening of the Spring Quarter twelve of the advisers were new since the Autumn Quarter. The fraternities and the men's counselor are working to achieve continuity by securing advisers who will serve three consecutive quarters.

Of the thirty-six advisers twenty-eight hold the B. A. degree from Stanford. Eight did their undergraduate work at these institutions; Yale, Washington, Fresno State, the College of the Pacific, Oklahoma, Oregon, Swarthmore, and the California Institute of Technology.

During the year the Interfraternity Council voted to invite a representative of the resident advisers to meet with the Council

as a non-voting member. The advisers elected their chairman to sit with the Council when invited. The resident advisers unanimously voted to arrange a dinner in October 1947 to which the President of the University, the Vice-President, the Dean of Students, and the Men's Counselor would be invited as guests to meet with the alumni advisers of the fraternities, the officers of the Interfraternity Board and the Council, with the resident advisers serving as hosts. The meeting, to be held at the beginning of the new academic year, would be for the purpose of bringing about closer acquaintance and association among all those attending.

The men's counselor's office kept the resident advisers and fraternity presidents informed during the year on the academic progress of their members and pledges, including those not living in the chapter houses. The office assembled with the assistance of the resident advisers a quarterly report on the scholastic rank of the houses and the distribution by grade point averages within each house. The University Scholarship Committee's annual report on student living groups and on men's and women's averages is sent to national, regional, and local officers of the fraternities.

Resident advisers work with the elected officers in the chapter. Each adviser in accepting appointment agrees to assume a certain degree of responsibility for exercising foresight and leadership in promoting the ideal of group self-discipline and maintenance of the good name of the fraternity and of the University. This responsibility in no way displaces that of the officers and members of the chapter. In addition to co-operating with the pledge-training chairman, the adviser serves in a special way as a scholarship chairman for the house and as liaison to acquaint members with resources of the University and personnel services that he may wish or need to use, including especially the occupational information and interest-testing services of the University and of the Veterans Guidance Center. With the resident advisers' chairman, Malcolm Dungan, leading the discussion, the advisers prepared and mimeographed for distribution their analysis of the duties and opportunities of their position, and sent copies to officers of the Interfraternity Council and of the University.

Resident assistants in residence halls. In each wing or corridor of Encina one graduate student serves as a counselor or resident assistant working with freshmen and co-operating with the upperclass sponsors chosen by the Associated Students' committee on sponsors. The assistant's chief duties concern academic, vocational, and personal problems. The sponsor's special interest is in the establishment of self-government among the freshmen, acquainting them with the traditions and opportunities of the University, particularly in connection with the Honor Code, the Fundamental Standard, and the various student organizations operating under the leadership of the Associated Students. The sponsor also sets up the organization of the hall in social, business, and intra-mural athletic matters, and is most important in setting a pattern for effective house government while seeking to develop and train leaders in the freshman class. On problems of personal development the sponsor and the resident assistant work together.

Resident assistants are chosen by a committee on selection, representing the dean of students and the men's counselor, and receive their board in freshman houses and their room in upperclass houses. They are chosen more for their personal fitness for working effectively with students than for professional training they may possess. In each hall at least one assistant is on the staff who is equipped to serve as a special consultant on problems in remedial reading. The assistants are from many departments of the University: law, business, education, engineering, art, music, English, modern languages, history, geology, and political science being represented among those serving in this capacity in 1946-47. They receive reports on the academic progress of the men of their wing, and discuss with the men their goals in coming to Stanford, their academic and vocational plans, and their handicaps and strengths as revealed by their grades during the year. They serve as informal counselors to refer men to their Lower Division advisers on matters of curriculum and to the specialized personnel services of the University when needed. In instances of maladjustment the assistant and the sponsor work together to assist, where possible or wise, in the student's becoming personally and constructively effective among his group associates.

A library of reference materials on occupations, vocational guidance, improvement in reading skills and diagnosis of reading handicaps, and other personnel matters is maintained in the conference room of the Encina office. All these catalogued reference materials are available on a loan basis to Encina sponsors and to resident assistants and the resident directors of Encina and Toyon. To this library have been added a number of books which were procured by the Men's Vocations Committee. The whole library is available to men students. All resident assistants and advisers in fraternities and University residences, as well as the members of the Vocations Committee of Encina, have annotated copies of a reading list on occupational information and University services in vocational guidance, based in part on the contents of the special library in Encina and the University library.

In Toyon the resident assistant is an older graduate student, a veteran, who has traveled widely, or, as in the case of Mr. Henry Blauth of the German Department, a member of the instructing staff. Mr. Blauth's year in Toyon was widely appreciated by students, and his friendly counsel was often sought by individuals and groups interested in travel, writing, literature and philosophy, and international relations, as well as group singing. Any student having an academic deficiency was given an opportunity to discuss it with a resident assistant, particularly to see whether the student failing in his major subject might discover from his experience and grades at Stanford a pattern of success in other departments of study in which he might hope to complete a major with good results. The men of Toyon were undergraduates, chiefly juniors and seniors, nearly all being veterans of World War II. They collected from among themselves much good clothing and sent it to needy persons in Europe, in addition to sending packages of food contributed through CARE by numerous individuals.

Resident directors in University residences. During the war a resident director was engaged to assist the Director of Men's

Residence in the operation of the Row houses and Toyon and Branner. However, until September 1946 no woman resident had ever served in that capacity in Encina. By authorization of the President and the Dean of Students, the Men's Counselor selected a resident director for Encina and one for Toyon. A two-room suite with bath and kitchenette had already been equipped for this use in Toyon, and a similar one was remodeled by December of 1946 from two rooms on the east side of the lobby of Encina. The duties of the resident director are mainly four: (1) supervising the making of adequate business records in the hall office, in harmony with requirements determined by the Business Office; (2) maintaining office services to cooperate with the sponsors, resident assistants, and elected officers of the hall, and handling room assignment matters in accordance with policies determined by the Dean of Students and a student committee on housing; (3) being available as a hostess when requested at parties in the hall; and (4) making sure that the established household maintenance services operate effectively for the comfort and well-being of residents of the hall.

Mrs. Ellene Sumner in Encina and Mrs. Gladys Philpott in Toyon have admirably served in this newly established position. They succeeded well personally and officially as attested by the assistance and appreciation given them by students and their elected officers. Mrs. Sumner is a graduate of Simmons College and was formerly secretary to a college president and member of a college personnel office. Mrs. Philpott is a graduate of the University of Oregon and has served as a student personnel staff member in Oregon schools and in the American Red Cross overseas.

Sponsors and Pre-Registration Committee plans for 1947-48.

The committee on sponsors appointed by the Associated Students' Executive Committee has done a superior job in choosing sixteen upperclass and graduate men from many applicants to serve in Encina for the coming year, with an alternate list from which to fill any vacancies that may occur during the year. Indicative of the calibre of men chosen is the fact that among them are a past president of the Associated Students, the past president of Stanford Village Council, the Honor Code Chairman, the chairmen of the student Pre-Registration Committees for new Lower Division men and also for new Upper Division men. Other highly representative men are in the list, and they have chosen for their room mates upperclassmen serving in such positions as student manager, editor of the DAILY, members of athletic teams; and the new president of the Associated Students is also to room at Encina in 1947-48. Plans made by the Pre-Registration Committees for the reception of new men and for the training of freshmen in assuming responsibility in self- and community-government show remarkable foresight and understanding in working to achieve the purposes of the Associated Students in serving the students and the University as a whole.

Shelton L. Beatty
Chief Counselor for Men

CHIEF COUNSELOR FOR WOMEN

In the fall of 1946, according to the plan of reorganization, the title of the Office of Dean of Women was changed to the Counselor for Women. The retirement of Dean Mary Yost was a real loss to the entire University, but the loss of her wisdom, understanding, and fine leadership was felt particularly keenly by the women students and members of her staff. The Acting Chief Counselor for Women appointed was Miss Elva Brown, and Miss Anastasia Doyle's title was changed from Director of Residences to Associate Counselor for Women.

The staff of the Counselor for Women, as during the previous year, consisted of five Directors, three Assistant Directors, nine housemothers, and nine Resident Assistants. There were several changes in personnel in the residences. Miss Mary Jane Donaldson, Director of Union Unit, was married and replaced by Miss Elizabeth Hartshorn, Director of Branner, 1945-46. Mrs. Inslee Flickinger, well-known to Stanfordites, succeeded Miss Hartshorn at Branner, and Mrs. Fanny Coffin was appointed housemother at Durand. Three Resident Assistants were appointed to positions of Assistant Directors—Mrs. Kay Nelson at Branner, Miss Helen Valencourt at Roble, and Miss Patricia Brauel at Lagunita.

Rumors to the contrary, the number of women enrolled in the fall quarter hit a new high—1946, compared to 1824 in 1945-1946. Of the 1587 undergraduates (compared with 1582 the previous year) 1270 were housed on the campus. Because of crowded conditions, housing in the residences could not be provided fall quarter for new undergraduates whose homes were between San Jose and Burlingame. However, by spring quarter all of this group who wished to move to the campus could be accommodated. The enrollment picture of the women would not be complete without mentioning the 121 married women, the 126 women veterans, and the fourteen women from foreign countries on student visas. These numbers also represent a new high at Stanford.

The residences used by the women in 1946-1947 were the same as those in use the last quarter of the previous year. Two unusual housing situations should be mentioned. Roble for the first time housed a hundred Sophomores. This came about because the University housing plan called for the return of Branner to the men, and it wasn't until the late summer that this decision was reversed. An additional 172 new students were admitted, and they, with eleven sponsors, were assigned to Branner.

The opening of Building 123 in Stanford Village for women was the second unusual housing situation. Veterans, graduates, and undergraduates above the normal college age were eligible for residence in this dormitory. Between 88 and 98 women took advantage of this opportunity, and there were surprisingly few changes in the residents throughout the year. A woman counselor responsible to the Village administration and to the Counselor for Women's Office also worked closely with the House Council (which was made up of the elected house officers). The Council, with approval from this office, formulated the regulations, based on the Fundamental Standard, for this group. The plan proved highly successful, and the women developed a fine sense of responsibility and a splendid group spirit of which they became justly proud. This group of women,

although small, contributed in no small way to the success of the Stanford Village experiment.

This year the women continued to relinquish their student body offices, except those so designated as women's positions (i.e. A.S.S.U. vice-presidency). During the year the last two jobs, that of the Student Manager and of the Editor of the Daily were taken over by the men. Within their own organization, though, there was considerable evidence that their interest in student government was continuing unabated. Miss Patricia Davidson, Executive Director of the Y.W.C.A. reported that the "Y" had superior leadership. Women's Conference Advisory Board became an active, vigorous group that prepared the way for future live Conference work. A leadership program was revived by Conference, and plans were made for its continuous development throughout the course of each year. The "Y" initiated and Conference cooperated in making definite plans for a much needed student body Activities Bureau. Conference also cooperated with the "Y" in their project of sending boxes to Europe. Through the dormitories and several Row Houses over 200 boxes of much-needed clothing and food were mailed to grateful Europeans. Council undertook its program of educating the women in the social standards with vim and vigor and laid the foundation for emphasis on the understanding of the standards and the prevention of offenses rather than stressing the penalizing phase of their work. Row Excom, which changed its composition from the vice-presidents to the presidents became an active and live governmental body with a Constitution approved by all the houses and used as a model for individual house constitutions. In addition to their weekly meetings, Row Excom met once a month with the housemothers and the Chief Counselor for Women to discuss problems common to the Row situation.

With the passing of war restrictions came a demand from the women students (the men seemed interested, too!) for a revamping of the social regulations. Following a study of the situation by a committee of students, a new set of standards was adopted by Conference in which social privileges increased with each year's satisfactory academic advancement.

The scholarship picture for the women during the past two years has been an interesting one. In the spring quarter of 1946 it took a tumble from 2.67 to 2.61 which wasn't too hard to understand. The reasons were evident. The veterans surprised the women by giving them keen competition, and the return of a "normal" campus social life required readjustment of time schedules that took a little time to work out. Fall quarter the women's academic average was 2.63 and by spring quarter 2.68. Readjustment was taking place.

The number of scholarships given to women was increasing, approximately 139 in 1946-47 as compared with 121 in 1945-46. Women students through their living groups and their organizations as Conference were becoming more conscious of the financial needs of their fellow students and were making plans for additional scholarships and dreaming of going into the foreign field as well. In addition, the financial pressure was becoming more evident by the few more tuition loan requests, 29 compared with 24.

A report of the current year's women activities would be incomplete without mentioning the interest its recent graduates have shown in jobs that promise a real future. Members of the

class of 1947 found opportunities in such fields as merchandising and personnel that offered promotions and advancement in salaries. Few were attracted to nursing and teaching. The mention of this definite interest in a vocation, rather than a temporary job, is not intended to infer that marriage was less popular in 1946-1947 than in previous years. Facts and figures would prove quite the contrary! However, there appears to be some indication that marriages have not necessarily meant that the young wives were any less interested in finding a job with a future. A study of the entire area of vocational interests and placements of Stanford women graduates might reveal considerable data that would have real value to the academic, counseling, and administrative staffs of Stanford.

Elva F. Brown
Acting Chief Counselor for Women

APPOINTMENT SERVICE

The year 1946-47 was the most active in recent years for the Appointment Service as revealed by the following figures.

	1942-43	1943-44	1944-45	1945-46	1946-47
Registrants	792	622	600	1184	1861
Orders from Employers	1764	1769	1928	3077	4336
No. 1 Placement of Candidates*	205	112	90	257	468

This large volume of business is explained in several ways. The labor market was more active. During the war, the number of available trained personnel was low, but by 1946-47, business, industry, government, and education were seeking to fill many vacancies as they resumed peacetime operations. The American economy was operating at full capacity and continuing to expand. Increased enrollment in the University was beginning to be reflected in a larger graduating class so that there were more students to be placed. The upswing in placement activity is also a reflection of an enlarged staff in the Appointment Service working more actively, and supported by a more adequate budget.

There were 468 No. 1 placements made by the Appointment Service. There were 181 No. 2, and 306 No. 3 placements.* This brings the total number of Stanford persons on the rolls of the Appointment Service who obtained positions to 955, of whom 649 were directly assisted by the office. This is almost three times as many as during the previous year.

*EXPLANATION OF DISPOSITION OF CANDIDATES

- No. 1 Placement—order received by office from employer, candidate recommended by office, and candidate obtains position.
- No. 2 Placement—office assisted candidate in some way in obtaining position, e.g. by sending confidential papers.
- No. 3 Placement—candidate on the active rolls of the Appointment Service during the year, may have been notified of positions, but finally took one where the office rendered no assistance as far as can be determined. In many of these cases, other persons or groups in the University were of assistance.
- No. 4 —still available, no position.
- No. 5 —unavailable (returned to old job, went to school, changed plans, etc.).
- No. 6 —no report.

Of the 1861 candidates seeking employment, 918 (49 per cent) were new registrants, and 943 (51 per cent) were re-registrants. The previous year, 537 (45 per cent) were new candidates, and 647 (55 per cent) were re-registrants.

EDUCATIONAL PLACEMENT

The picture of supply, demand, and placement for teachers, administrators, and supervisors in educational positions for the period 1942-43 to 1946-47 is reflected in the following figures.

	1942-43	1943-44	1944-45	1945-46	1946-47
Registrants	444	359	364	623	892
Orders from Employers	1159	1147	1411	2473	3145
No. 1 Placements	106	70	65	173	229

Of the 892 Stanford graduates who were actively seeking educational positions through the Appointment Service, 268 (30 per cent) were new, and 624 (70 per cent) were re-registrants. This compares with 277 (44 per cent) new registrants the previous year and 346 (56 per cent) re-registrants.

There were 250 (28 per cent) seeking administrative, supervisory, and personnel positions, as opposed to 233 (37 per cent) in 1945-46, and 632 (72 per cent) who wanted teaching positions in comparison with 390 (63 per cent) in 1945-46.

Of the 3,145 vacancies listed, 466 (15 per cent) were in administration and 2,679 (85 per cent) in teaching. The No. 1 placements in administration were 49 (21 per cent) and in teaching 180 (79 per cent).

The number of student teachers during 1946-47 was 124 as compared with 75 in 1945-46.

Orders and placements in educational positions in 1946-47 were distributed as follows:

	Total Orders	No. 1 Placements
Administration		
California Public Schools	242	24
Other States Public Schools	23	8
California Colleges & Universities	29	11
Other States Colleges & Universities	63	4
California Private, Foreign, & Government	47	1
Outside Calif. Private, Foreign, & Gov.	62	1
Total Administration	466	49
Teaching		
California Public Schools	1373	88
Other States Public Schools	41	13
California Colleges & Universities	219	49
Other States Colleges & Universities	714	21
California Private, Foreign, & Government	123	7
Outside Calif. Private, Foreign, & Gov.	209	2
Total Teaching	2679	180
Grand Total	3145	229

Appointment Service

VACANCIES, CANDIDATES, PLACEMENTS, APPOINTMENT SERVICE, STANFORD UNIVERSITY
 SEPTEMBER 1, 1946 to SEPTEMBER 1, 1947
 College and University Teaching

Classification	Orders from Employers			Candidates Seeking Positions		Disposition of Candidates					
	Calif.	Other States	Total	All Choices	#1	#1 Direct Placement	#2 In-direct Placement	#3 Placed With-out Assistance App't. Service	#4 Still Avail-able	#5 Not Avail-able	#6 No Report
No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12
Education	28	74	102	150	62	15	12	4	3	20	8
Eng., Industrial Arts	12	53	65	29	9	2	2	1	--	2	2
Home Economics	--	10	10	--	--	--	--	--	--	--	--
Art	3	9	12	18	10	3	1	2	1	2	1
English	26	80	106	71	29	9	2	4	--	10	4
Drama, Public Speaking	3	34	37	40	18	4	4	3	2	3	2
Journalism	1	5	6	9	6	1	2	1	--	--	2
French	1	12	13	17	3	--	2	1	--	1	--
German	1	5	6	11	3	1	--	1	--	1	1
Latin	--	1	1	3	1	--	--	--	--	--	--
Italian	--	--	--	--	--	--	--	--	--	--	--
Spanish	5	20	25	23	7	1	1	1	--	4	--
Other Foreign Languages	--	--	--	--	--	--	--	--	--	--	--
Music	4	23	27	5	1	--	1	--	--	--	--
Philosophy and Religion	2	5	7	9	1	--	--	--	--	--	1
Physical Education-Men	12	15	27	23	12	--	2	2	--	3	5
Physical Education-Women	5	24	29	18	6	1	1	2	--	2	--
Mathematics	11	40	51	16	5	--	3	1	--	--	--

VACANCIES, CANDIDATES, PLACEMENTS, APPOINTMENT SERVICE, STANFORD UNIVERSITY
SEPTEMBER 1, 1946 to SEPTEMBER 1, 1947

College and University Teaching (Continued)

	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12
Biological Science	12	66	78	18	8	2	-	2	-	3	1	1
Physical Science	54	21	75	26	12	3	5	1	2	-	-	-
Social Science	3	17	20	20	2	2	-	-	-	1	-	-
Business and Economics	14	101	115	47	34	7	5	5	1	1	9	7
Geography	-	1	1	6	4	-	1	1	-	-	2	-
History	2	14	16	46	44	4	8	10	1	-	8	13
Political Science	3	12	15	15	7	3	1	-	1	1	2	-
Psychology	14	53	67	41	22	7	3	4	4	-	5	3
Sociology	3	19	22	9	4	1	-	1	1	1	1	-
Totals of College and University Teaching -	219	714	933		310	70	56	47	12	78	50	

Appointment Service

VACANCIES, CANDIDATES, PLACEMENTS, APPOINTMENT SERVICE, STANFORD UNIVERSITY
SEPTEMBER 1, 1946 to SEPTEMBER 1, 1947

Public School Teaching (Elementary, High School and Junior College)

Classification	Orders from Employers			Candidates		Disposition of Candidates					
	Calif.	Other States	Total	Seeding All Positions	#1 Choices	#1 Direct Place- ment	#2 In- direct Place- ment	#3 Placed With- out Assis- tance App't. Serv.	#4 Still Avail- able	#5 Not Avail- able	#6 No Report
No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12
Commerce, Business	87	3	90	34	17	6	1	4	-	3	3
Industrial Arts	56	5	61	10	4	1	2	4	-	-	1
Home Economics	62	1	63	15	6	3	1	-	-	-	2
Art	28	3	31	18	11	2	1	-	2	3	3
English, Journalism	149	2	151	129	55	12	9	6	2	9	14
Drama, Public Speaking	18	2	20	44	27	5	6	3	2	7	4
French	5	1	6	31	7	2	-	-	1	3	1
German	3	1	4	6	-	-	-	-	-	-	-
Latin	14	1	15	15	3	1	-	-	1	1	-
Spanish	29	-	29	29	7	5	1	-	-	-	1
Other Foreign Language	1	-	1	1	6	6	3	-	-	-	-
Music	28	4	32	31	6	1	6	1	1	4	11
Physical Education-Men	54	2	56	51	31	6	3	3	2	-	5
Physical Education-Women	63	4	67	22	16	4	4	2	2	-	2
Mathematics	53	3	56	52	14	2	1	1	-	9	1
General Science	84	-	84	73	11	6	2	5	-	1	-
Biological Science	2	-	2	-	11	1	5	5	-	1	-
Physical Science	19	9	28	-	14	3	2	3	-	3	-
Social Studies	54	-	54	150	50	12	9	3	8	-	3

VACANCIES, CANDIDATES, PLACEMENTS, APPOINTMENT SERVICE, STANFORD UNIVERSITY
SEPTEMBER 1, 1946 to SEPTEMBER 1, 1947

Public School Teaching (Elementary, High School and Junior College - Continued)

	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12
Psychology		4	-	4	-	2	2	-	-	-	-	-
Elementary		560	-	560	87	21	21	-	-	-	-	-
Totals of Public School Teaching		1373	41	1414		319	101	52	33	23	51	59

VACANCIES, CANDIDATES, PLACEMENTS, APPOINTMENT SERVICE, STANFORD UNIVERSITY
SEPTEMBER 1, 1946 to SEPTEMBER 1, 1947

Private, Government, Foreign Teaching

Classification	Orders from Employers			Candidates		Disposition of Candidates					
	Calif.	Other States	Total	Seeking Positions	#1 Choices	#1 Direct Placement	#2 In-direct Placement	#3 Placed with Assistance App't. Service	#4 Still Available	#5 Not Available	#6 No Report
No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12
Commerce, Business	5	8	13	-	1	1	-	-	-	-	-
Industrial Arts	7	3	10	-	-	-	-	-	-	-	-
Engineering	-	6	6	-	-	-	-	-	-	-	-
Home Economics	4	2	6	-	-	-	-	-	-	-	-
Art	2	1	3	-	-	-	-	-	-	-	-
English, Journalism	5	10	15	-	1	1	-	-	-	-	-
Speech, Drama	2	-	2	-	-	-	-	-	-	-	-
Latin	3	1	4	-	-	-	-	-	-	-	-
Modern Languages	47	2	49	-	-	-	-	-	-	-	-
Music	-	2	2	-	-	-	-	-	-	-	-
Physical Education	19	3	22	-	3	3	-	-	-	-	-
Mathematics	9	10	19	-	1	1	-	-	-	-	-
Biological Science	6	10	16	-	1	1	-	-	-	-	-
Physical Science	-	6	6	-	-	-	-	-	-	-	-
Social Studies	4	4	8	-	1	1	-	-	-	-	-
Geography	-	6	6	-	-	-	-	-	-	-	-
Elementary	10	135	145	-	1	1	-	-	-	-	-
Totals of Private, Gov't., Foreign Teaching	123	209	332	-	9	9	-	-	-	-	-

VACANCIES, CANDIDATES, PLACEMENTS, APPOINTMENT SERVICE, STANFORD UNIVERSITY
SEPTEMBER 1, 1946 to SEPTEMBER 1, 1947

Administration - All Levels

Classification	Orders from Employers			Candidates Seeking Positions*		Disposition of Candidates					
	Calif.	Other States	Total	All Choices	#1 Choices	#1 Direct Placement	#2 In-direct Placement	#3 Placed With-out Assis-tance App't. Service	#4 Still Avail-able	#5 Not Avail-able	#6 No Report
No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12
Colleges and Universities:											
General Administration	8	24	32	54	5	3	1	-	-	1	-
Public Schools:											
Superintendent	22	5	27	154	63	4	4	6	2	42	5
Principal	51	-	51	165	76	10	12	10	4	31	9
Private, Gov't., Foreign:											
Supt. and Head Mistress	9	-	9	-	1	1	-	-	-	-	-
Principal	-	4	4	-	-	-	-	-	-	-	-
Supervision (all levels)	178	93	271	-	43	15	6	5	2	14	1
Personnel and Guidance	50	22	72	250	63	16	11	5	1	30	-
(all levels)											
Totals of Administration	318	148	466		251	49	34	26	9	118	15
GRAND TOTALS OF											
Teaching and Administration	2033	1112	3145		889	239	142	106	44	247	124

* "#1 Choices" refers to the number of candidates primarily interested in each field; "All Choices" refers to the total number of candidates who indicate qualification and interest in each field, irrespective of their first choice - Since candidates usually indicate interest in more than one field, the "all choices" column contains many duplicates.

Two-thirds of the orders received were from California Schools and 80% of all #1 placements were in California.

The general supply and demand picture in education continues to be one of shortages, although there is a noticeable easing off in some instances. In the elementary schools, particularly in California, the shortage of teachers is even more critical than a year ago. In the secondary schools a shortage still exists in the practical arts, such as vocational agriculture, home economics, industrial arts, women's physical education; the situation is fairly tight in the sciences; but the period of scarcity of regularly certificated teachers in many of the humanities, especially English, and in the social sciences is about over. As always, there was a surplus of regularly certificated candidates aspiring to initial or better administrative positions. Because no state credentials are required for teachers and administrators in colleges and universities, generalization about supply and demand in the field is difficult. There is an unprecedented demand for college and university teachers in almost all fields, and there were good opportunities in most fields for those with masters and doctors degrees, provided they did not place undue geographical restrictions upon their choices.

BUSINESS, INDUSTRY AND GOVERNMENT

Employment in business and government received increasing attention in the Appointment Service program during 1946-47. This is shown by the following comparative figures on vacancies, candidates, and placements for the past five years:

	1942-43	1943-44	1944-45	1945-46	1946-47
Registrants	348	236	263	561	969
Orders from Employers	605	622	517	604	1191
No. 1 Placement of Candidates	99	42	25	74	239

The total of 1191 orders listed by business and governmental organizations is almost double the number of requests received in 1945-46. However, this figure in itself does not represent the number of potential job openings in these organizations, since all orders involving more than five openings were classified as one order so that the distribution in the various fields would not be distorted. This was particularly true in the case of requests for technically trained personnel where the post-war needs of industry were in the "tens" and even "hundreds" in several instances.

The expanded activities of the office in the fields of business and governmental employment are clearly shown as well in the number of registrants and placements. The 969 registrants represent a 60% increase over 1945-46. The more effective operation of the Service in getting people to the jobs is apparent in the over three-fold increase in placements, 264 as compared with 74. Interesting comparisons on the supply and demand relationships and the placement assistance afforded by the office in the various fields may be obtained by reference to the detailed breakdown for all job classifications. It can be readily seen, for example, that the demand for accountants and for sales representatives exceeded the supply of candidates who had indicated this field as their major employment

objective. In other job classifications, such as personnel and industrial relations, the supply-demand picture is reversed. This type of comparative information should be of value to those outlining their programs for vocational preparation and to graduates planning their job-hunting activities.

An increasing number of employers are coming directly to the colleges and universities to recruit personnel for their organizations. Inasmuch as their needs often cut across several occupational fields, they appreciate a coordinated placement service through which they may list jobs and arrange to interview applicants. The Appointment Service provided this type of assistance by relaying information to the Schools and Departments concerned and scheduling students for appointments, thereby saving time for both the employer and the faculty. In 1946-47 representatives of 66 business and governmental organizations visited the Appointment Service and interviewed 1209 applicants, many of whom were subsequently placed. For those who did not obtain positions, the interviews provided valuable opportunities to survey the employment field.

Appointment Service

VACANCIES, CANDIDATES, PLACEMENTS, APPOINTMENT SERVICE, STANFORD UNIVERSITY
 SEPTEMBER 1, 1946 to SEPTEMBER 1, 1947
 Engineering, Scientific and Technical

Classification	Orders from Employers				Candidates Seeking Positions		Disposition of Candidates					
	Calif.	Other States	Foreign	Total	All Choices	#1 Choices	#1 Direct Placement	#2 In-direct Placement	#3 Placed With-out Assistance App't. Service	#4 Still Avail-able	#5 Not Avail-able	#6 No Report
No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12	No.13
Eng., Scientific & Tech.	12	19	3	34	28	4	--	--	2	2	--	--
General Engineering	36	15	5	56	28	9	1	--	2	3	3	--
Engineering, Chemical	14	4	--	18	18	49	17	--	10	11	6	--
Engineering, Civil	43	2	5	50	60	93	27	5	12	27	12	2
Engineering, Electrical	43	14	--	57	103	93	15	--	3	16	6	4
Engineering, Industrial	31	3	1	35	93	43	25	1	19	25	7	2
Engineering, Mechanical	39	13	3	55	113	85	3	--	3	2	1	8
Engineering, Mining	10	9	1	20	27	14	3	1	7	10	--	1
Engineering, Sales	25	5	1	31	95	27	6	--	3	10	6	--
Biology	8	--	--	8	31	24	3	1	3	5	9	1
Chemistry	50	10	--	60	60	46	12	4	12	1	2	--
Dietetics	1	--	--	1	4	3	1	--	--	1	1	--
Geology	1	1	1	3	12	9	5	--	1	1	--	--
Laboratory Technician	4	--	--	4	20	1	3	--	--	2	--	--
Math. & Statistics	--	5	--	5	15	7	--	1	1	1	--	--
Physics	4	9	--	13	11	2	--	--	2	2	--	--
Therapy	--	--	--	--	2	2	--	--	--	--	--	--
Totals of Engineering	321	109	20	450	692	418	118	13	77	118	53	19

Appointment Service

VACANCIES, CANDIDATES, PLACEMENTS, APPOINTMENT SERVICE, STANFORD UNIVERSITY
SEPTEMBER 1, 1946 to SEPTEMBER 1, 1947

Government and Public Service

Classification	Orders from Employers			Candidates		Disposition of Candidates					
	Calif.	Other States	Foreign	Total	Seeking Positions All Choices	#1 Direct Placement	#2 Indirect Placement	#3 Placed without Assistance App't. Service	#4 Still Available	#5 Not Available	#6 No Report
Gov. & Public Service	9	2	--	11	--	2	--	--	1	--	--
Civic & Ind. Organ.	7	2	--	9	35	--	--	--	3	--	--
Economist	2	--	--	2	16	2	--	--	--	--	--
Enggr., Scientific & Tech.	71	18	--	89	66	5	1	3	16	4	2
Foreign Service	1	7	--	8	72	--	--	1	--	--	--
Municipal Utilities	6	--	--	6	15	--	--	--	10	--	--
Psychology & Sociology	18	5	--	23	49	2	1	3	8	5	4
Public Administration	21	4	--	25	45	2	--	2	2	2	--
Recreation	8	6	--	14	25	--	--	1	2	2	--
Transl. & Interp.	--	3	--	3	13	--	--	--	2	1	--
Totals of	--	--	--	--	--	--	--	--	--	--	--
Gov. & Public Service	143	47	--	190	336	13	2	10	41	14	6

Appointment Service

VACANCIES, CANDIDATES, PLACEMENTS, APPOINTMENT SERVICE, STANFORD UNIVERSITY
SEPTEMBER 1, 1946 to SEPTEMBER 1, 1947

Business and Industry

Classification	Orders from Employers			Candidates Seeking Positions* All Choices	Disposition of Candidates							
	Calif.	Other States	Foreign		Total	#1 Direct Placement	#2 Indirect Placement	#3 Placed Without Assistance App't.. Service	#4 Still Available	#5 Not Available	#6 No Report	
No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12	No.13
General Business	13	5	1	19	131	43	3	--	9	18	7	4
Accounting	71	7	7	85	49	31	5	--	13	9	5	3
Credits & Collections	9	1	--	10	19	1	1	--	1	--	1	--
Office & Office Mgt.	121	6	--	127	162	69	15	4	28	12	12	13
Personnel & Ind. Relat.	29	--	--	29	153	69	6	3	6	19	7	7
Production	4	--	--	4	66	5	1	--	2	--	--	1
Public Relations	1	--	--	1	53	5	--	--	1	4	--	--
Purchasing	8	--	2	10	26	7	2	--	--	2	--	2
Research & Analysis	18	--	--	18	48	4	3	--	1	1	--	--
Sales	89	13	1	103	137	54	16	5	19	7	7	8
Agriculture	1	--	--	1	8	1	--	--	2	--	1	--
Advertising	8	--	1	9	32	18	2	--	2	6	1	5
Art	6	--	--	6	24	12	--	--	1	8	2	--
Banking & Finance	29	2	--	31	88	27	8	2	4	5	5	4
Entertainment	--	--	--	--	7	17	1	--	--	--	--	--
Foreign Trade	3	1	--	4	102	10	1	--	--	9	2	1
Hotel & Restaurant Mgt.	--	--	--	--	3	--	--	--	--	--	--	--
Insurance	32	5	--	37	64	--	7	2	4	1	4	--

Appointment Service

VACANCIES, CANDIDATES, PLACEMENTS, APPOINTMENT SERVICE, STANFORD UNIVERSITY
SEPTEMBER 1, 1946 to SEPTEMBER 1, 1947

Business and Industry (Continued)

	No.1	No.2	No.3	No.4	No.5	No.6	No.7	No.8	No.9	No.10	No.11	No.12	No.13
Journalism	3	1	--	4	32	28	2	--	8	12	3	7	
Manufacturing	--	--	--	--	23	22	2	2	1	2	2	4	
Merchandising	42	3	--	45	111	23	18	--	5	5	1	4	
Radio	1	--	--	1	26	7	--	1	2	--	2	1	
Real Estate	--	--	--	--	7	2	--	--	1	2	2	--	
Transportation	5	--	--	5	68	17	5	--	2	6	1	1	
Utilities	2	--	--	2	26	--	1	1	1	--	--	--	
Totals of Business & Industry	495	44	12	551	1465	472	99	20	113	128	62	65	
Business & Industry Candidates Placed in Teaching	--	--	--	--	--	--	9	4	--	--	--	--	
GRAND TOTALS Engr., Scientific & Tech Gov. & Public Service Business & Industry	959	200	32	1191	2493	985 *	239	39	200	288	129	90	

* Includes 16 non-registered candidates who obtained positions through interviews scheduled by the Service.

* "#/ Choices" refers to the number of candidates primarily interested in each field; "all choices" refers to the total number of candidates who indicate qualification and interest in each field, irrespective of their first choice. - Since candidates usually indicate interest in more than one field, the "all choices" column contains many duplicates.

STUDENT EMPLOYMENT

The figures which show the activity of the Student Employment Division of the Appointment Service for 1946-47 are as follows:

	Number	Per Cent
Enrollment in the University 1946-47 (exclusive of duplicates)	9,088	
Registered with student employment division for part-time or full-time temporary work	2,316	25.48
Number of Jobs Filled (*One applicant may fill several jobs).	2,504	108*

It is interesting to compare these figures with those of the previous year when 1,000 students registered for work and there were 1,264 placements.

Part-time Work:	Orders from Employers	2,924
	Placements	2,142
Full-time Work:	Orders from Employers	305
	Placements	362
	Referrals	471

(The known placement figure for student full-time work is below what the actual figures would be if follow-up could have been made on each referral. The number of placements exceeds the number of orders because while one person may have been requested, several applicants may be employed.)

Row House Hashers:	Applicants	280
	Placements	121

The Appointment Service extended its facilities to a large number of non-Stanford persons, particularly student veterans' wives who were looking for work in the vicinity. The office serves a personnel recruitment function for the University departments, in their search for clerical and stenographic assistance. The magnitude of this "extra" assignment is reflected in the following figures:

Orders	321
Non-Stanford Candidates	992
No. 1 Placements	154

Appointment Service

General

The staff situation in the Appointment Service continued to improve in 1946-47. There were at the end of the year the following full-time persons: director, two assistant directors, office manager, two stenographers, four records clerks and a receptionist. The expanding activities of the service required more space so that the office was moved to Rooms 166 and 174 on the second floor of the Administration Building. Two interview rooms for employers were made available for the first time.

Files and personnel were rearranged to permit a more functional operation, and records, forms and procedures were simplified to permit handling of the larger volume of business. The confidential papers prepared for each candidate were revised to provide additional data. These papers have newly designed jackets and are prepared by a multilith process.

In order to make the facts and figures derived from the experience of the office of maximum use for vocational guidance purposes, they are presented in detail in the foregoing tables. The essential question is one of balance between supply and demand in each of the various fields. It is planned that each year henceforth these figures will be available to students and counselors so that they may be correctly informed concerning employment opportunities. The staff made numerous presentations before student groups on problems of vocational choice and job opportunities. The office continued to interpret for men the results from the Strong Vocational Interest Inventory.

Working in cooperation with the Placement Committee of Stanford Associates, many field trips were made to meet employers and to determine their personnel needs.

VETERANS' RECORDS OFFICE

The plans and procedures which were formulated during the previous academic year were found to be sufficiently adequate to cope with the increased veteran enrollment Autumn Quarter. Veterans were entered into training; the many forms which the Veterans' Administration required were processed; and numerous inquiries, regarding veterans' rights under the G. I. Bill, were answered and clarified. The Veterans' Records Office maintained an effective liaison with the Veterans' Administration, kept abreast of the rapidly changing regulations and administrative procedures, and was responsible for all correspondence pertaining to veterans and veterans' affairs.

A revision of the "Veterans' Guide" was published which clarified the veteran's rights and benefits under the G. I. Bill in the light of recent government directives and legislation. The procedures for authorizing and issuing books and supplies and registration day procedures were further improved to facilitate greatly the veteran's entrance and continuance in training.

Following are the various types of government aid plans which were utilized by veterans at Stanford University:

- I. Public Law No. 346:
This law provided training for veterans who served ninety days or more on active duty and who were discharged "under conditions other than dishonorable".
- II. Public Law No. 16:
This Rehabilitation Act provided training for veterans who had a service-connected disability of 10% or greater.
- III. California Educational Institute Act:
This act provided training for veterans who, at the time of enlistment or induction into service, were bona fide residents of the State of California.
- IV. Canadian Department of Veterans Affairs:
This program provided training for veterans who served in the Canadian Army.
- V. State of Oregon Educational Plan:
This plan provided training for veterans who were residents of Oregon at the time of enlistment or induction.

STATISTICAL REPORT OF VETERAN ENROLLMENT

Fall Quarter:		
Veterans attending under Public Law 346		3811
Veterans attending under Public Law 16		156
Veterans attending under California		
	State Program	72
Veterans attending under Canadian Program		8
Total veteran enrollment, Fall Quarter		4057

Winter Quarter:

Veterans attending under Public Law 346	3886
Veterans attending under Public Law 16	168
Veterans attending under California	
State Program	39
Veterans attending under Canadian Program	<u>11</u>
Total veteran enrollment, Winter Quarter	4104

Spring Quarter:

Veterans attending under Public Law 346	3928
Veterans attending under Public Law 16	189
Veterans attending under California	
State Program	41
Veterans attending under Canadian Program	11
Veterans attending under Oregon State Program	<u>1</u>
Total veteran enrollment, Spring Quarter	4170

Summer Quarter:

Veterans attending under Public Law 346	2046
Veterans attending under Public Law 16	125
Veterans attending under California	
State Program	9
Veterans attending under Canadian Program	<u>15</u>
Total veteran enrollment, Summer Quarter	2195

GEORGE D. BARAHAL
Veterans' Coordinator

VETERANS' GUIDANCE CENTER

Organizational Plan

The Center operates on a contractual relationship with the Veterans Administration whereby Stanford University is reimbursed on a per capita basis (a stipulated fee for each veteran counseled). The Director, the Vocational Counselors, the Psychometrist, and the clerical staff, are employed by the University. A vocational adviser is assigned by the Veterans Administration; his primary functions are to check the final vocational objective selected as to suitability and adequacy, and to authorize reimbursement to the University.

The Guidance Center staff employed by Stanford University consists of one director who is also Coordinator of Veterans' Affairs, two full-time vocational counselors, three part-time counselors (fifteen hours per week), one full-time psychometrist, one part-time psychometrist, and one secretary. The personnel assigned by the Veterans Administration consists of one vocational adviser and a secretary.

The Director's primary functions are supervision and administration of the Guidance program, counseling of special cases, referring cases for psychiatric or other special treatment, planning and evaluation. The counselor's primary function is to make a study of the individual veteran for the purposes of ascertaining his vocational interests, aptitudes, attainments, personality traits, limitations imposed by any physical or mental disability, and to assist him in the selection of a vocational objective which is compatible with these traits.

Operational Plan

Any veteran who is eligible for training under either Public Law 16 or Public Law 346 may request guidance service. Public Law 16 is the Rehabilitation Act which provides training for veterans who have a service-connected disability of ten percent or more. Need for training to rehabilitate the veteran must be established. Guidance is provided for the purpose of helping the disabled veteran select an employment or educational objective which will enable him to compensate for his handicap by becoming "employable" in a vocation which is compatible with his disability. This guidance always includes an analysis of the veteran's occupational capacities as affected by his disability, the study of his vocational interests and desires, and the application of occupational information in order to select a suitable employment objective.

Public Law 346 is the law which provides education or training to any veteran who served ninety days or more with the Armed Forces and who was discharged "under conditions other than dishonorable". Basically, the procedure for counseling the disabled and non-disabled veteran is the same, except that with the Public Law 16 veteran, the

disability is an important factor to be considered. Vocational guidance is the major emphasis. However, in dealing with the total individual, it is recognized that problems overlap, and that the individual cannot be divided into fragments. Consequently the counselor is constantly on the alert for manifestations and symptoms of emotional, social or other maladjustments. Referrals are made if the problem is too complex for the counselor to deal with adequately.

CUMULATIVE STATISTICAL REPORT OF WORK
ACCOMPLISHED IN THE GUIDANCE CENTER

Total Number of Cases Completed	1054
Total Number of Cases In Process	<u>169</u>
Total	1223

TRAINING PROGRAMS CLASSIFIED BY MAJOR TYPES

Program	P. L. 16	P. L. 346
On-the-Job Training	50	8
Non-College Institutional Training	0	4
College training or higher (at other than Stanford University)	27	28
Stanford University	135	773
No further training or deferred training	<u>12</u>	<u>17</u>
Total	224	830

CLASSIFICATION OF OCCUPATIONAL OBJECTIVES

Occupational Objective	P. L. 16	P. L. 346
Professional	136	497
Semi-Professional and Technical	15	38
Managerial	5	46
Clerical	4	26
Sales	6	82
Agricultural and Kindred	1	2
Skilled Trades	30	5
Semi-Skilled Trades	1	2
Protective Service Occupations	1	0
No Employment Objective Selected	<u>25</u>	<u>132</u>
Total	224	830

VOCATIONAL CHOICES OF STANFORD STUDENTS

Vocation	P. L. 16	P. L. 346
Advertising	5	18
Architecture	2	9
Biology	3	10
Business and Sales - Sales	3	79
Managerial	2	52
Accounting	6	40
Chemistry	2	10

Veterans' Guidance

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Economics	6	23
Engineering - Mechanical	5	38
Electrical	5	25
Chemical	0	5
Industrial	7	41
Mining and Petroleum	2	7
Civil	6	18
Geology	1	14
Graphic Arts	3	3
History	0	2
Journalism	6	21
Law	22	73
Medicine	10	14
Personnel	4	23
Physics	1	9
Psychology	2	13
Speech and Drama	0	1
Teaching	18	66
Miscellaneous (Agri., Phys.Ed., Occ'l Therapy)	4	41
No Objective Selected	10	118
Total	135	773

TESTS ADMINISTERED IN THE VETERANS' GUIDANCE CENTER

Type of Test	Number Administered
Vocational Interest Tests	1759
Achievement Tests	1628
Special Aptitude Tests (including Mechanical, Clerical, Art Judgment, etc.)	1034
Personality Tests	472
Mental Ability Tests	303

GEORGE D. BARAHAL
Director of Guidance Center

STANFORD VILLAGE

Stanford University assumed control of Dibble Hospital on August 1st, 1946, as a housing project for student veterans of World War II, under the terms of the Lanham Act. This \$8,000,000 Army hospital renamed Stanford Village is located on the 127 acres of the former Timothy Hopkins estate. Single students were admitted to the Village on September 19th. Student families began moving into apartments on October 11th. The last apartment was completed in May, 1947.

The name, Village, suggested the underlying concept for a student personnel program in Stanford Village. The idea of a small democratic community with its neighborliness and simplicity has been fostered. Student self-government through a Village Council, House Councils, and a Village Family Council has been developed as an educational experience as well as a governing device.

Stanford Village has predecessors in the thirteenth century hospicia or hostels of Bologna, Oxford, and Paris which were set up as self-governing, democratic groups to house the thousands of students who flocked into those cities for education. The problems of student, mass-housing are not peculiar to modern education.

The initial problems faced in planning a personnel program for the Village centered, very largely, around administrative and logistical matters. Construction, equipment, transportation, study facilities, and food service presented major, immediate difficulties. From a personnel program standpoint, however, the reaction of student veterans to a military installation as a housing project was more important. How would they react to barracks surroundings, commuting three miles to classes, and eating in a former army mess-hall? How many students would be combat injured and potential psychiatric cases? How could Village and student morale be built? On what basis and how should an estimated two thousand students be assigned to twenty-two barracks, one-third of which were open, ward-type rooms? How could maximum opportunity for congenial living and study be developed? How would veterans succeed as students? What could be done for fourteen hundred student families who were applying for three hundred Village apartments which were not ready for occupancy? What should be the extent of and the institution's attitude toward rules and regulations regarding the behavior of students whose average age proved to be twenty-three years old? How could the extracurricular life be made to contribute more constructively to the fundamental purpose of the institution?

The Village personnel program is based on the belief that men must be fitted to take their places in the community and live in contact with their fellow men. Students should live together, eat together, and talk together, in order to grow intellectually and socially. The Village is not a place for scholastic hermits. The Village is an opportunity for a student to experience real problems of governing by democracy and to begin to appreciate the complexity of a free society. Broad, over-all planning and group organizational work for the first year have been placed ahead of individualized, clinical procedures in the Village personnel program.

One thousand and seventy-three single male students, eighty-four single women students, and seventy-eight married childless couples occupied their respective areas of the Village on September 27th, 1946.

Single male students covered an age range from sixteen years old to forty-nine years old. Two-fifths of these were graduate students; an equal number were lower division students; and the remainder were upper division. The population had changed considerably by the end of the Spring Quarter. Three hundred families with two hundred sixteen children occupied the apartment area. The number of single male students had dropped to nine hundred and eighty. The number of childless couples had dropped to forty-three and the women students had increased to one hundred and eight.

Single male students of similar professional interest have been housed together and, wherever possible, grouped on the basis of class standing. The graduate students in Business, for example, have been housed together. This homogeneity of grouping has been very popular among the students. However it has led to noticeable and possibly excessive preoccupation with professional fields. Single women veteran students were assigned to a separate building under the supervision of the Counselor for Women. Student families have been assigned to apartments in accordance with the terms of the Lanham Act and a point system worked out by a student-faculty committee. Preference is given to families with children. Childless couples have been assigned to smaller apartments and single rooms in one of the dormitories.

Foreign students were assigned to quarters on the same basis as American students, without regard for nationality, and by request from most of the foreign students among whom were Turks, Iranians, Indians, Philipinos, Europeans, Central and South Americans. This arrangement proved eminently satisfactory and a good start on The Hope of the Great Community of which Josiah Royce wrote.

Graduate and upper-division students were assigned to Houses in which single and double rooms predominated. Rooms were assigned by the House Counselors when the students arrived. This decentralization of administrative procedure was necessary under the circumstances but proved inefficient. The Village Counselor's Office took over this responsibility Winter Quarter, 1947.

Study areas were set up in strategic centers throughout the Village which proved to be unwise after a short trial period. Students preferred studying in their quarters. Desks and chairs were redistributed on that basis. Lighting facilities and study surfaces are still inadequate. Scholastic records of Village students have been satisfactory. The Report of the Faculty Committee on Scholarship for January 8, 1947, indicated that 22 male students on probation were living in the Village. The Village male population at that time was 1081. The total number of male students listed on probation for the entire university was 213 and the entire male population at that date was 5213. In other words, the Village had ten percent of the academic probationers and twenty-one percent of the university's male population.

In addition to the Resident Counselor and Assistant who were charged with organizing the Village personnel program, there were eighteen House Counselors, each responsible for his own House organization and morale. The House Counselors were selected because of their experience and friendly, active interest in people. All were senior or graduate students and had seen service in all branches of the Army, Navy, and Marine Corps. One commanded a destroyer.

Another was a lead combat bombing officer. The law students were counseled by a naval aviator who was in his third year of law. The pre-medics were counseled by an M.D. instructor who had served on a destroyer. The engineers were counseled by a former Army Major and his wife. The use of young faculty couples as Counselors proved very satisfactory. What the Counselors lacked in training and experience in personnel work was made up by an attitude of friendly, cooperative interest and an effort to know every individual.

In-service training meetings were held with the Counselors every three weeks. All departments of the University which had a direct relationship to the personnel program were called on to provide speakers at these meetings. The Veterans' Bureau, Dean of Students, President's Office, Appointment Service, School of Education, Department of Psychology, and Registrar provided programs. The In-service program was used to acquaint the Counselors with other agencies of the University which might assist students and to familiarize them with some of the fundamental principles of counseling.

Each Counselor was required to maintain a Record Card on each student. He was held responsible for the organization within his own House for morale building and for awareness of student needs. Administrative routine was almost entirely removed from his hands. He had no disciplinary responsibility. The Village Counselor's Office assumed that obligation. Student academic deficiencies were referred to the House Counselor for investigation and report to the Village Counselor who served as an over-all clearing house and supervising agency. The Counselor served in a liaison capacity between students and the Village administration. He was not held for diagnostic or remedial service but rather for preventive organizational and social activities.

The name, Stanford Village, with its physical plant - a complete community: a United States Post Office, Well-Baby Clinic, Nursery, Kindergarten, Barber Shop, Grocery Store, Meat Market, Apartments, Play-grounds and Sand-Boxes, Accommodation Store, Haberdashery, Press and Laundry Shop, Soda Fountain, Self-Service Bendix Laundry, Restaurant, Bowling Alley, Village Club, Tennis Courts, and even vegetable and flower gardens, all seemed to present an opportunity for experience in community living and democratic citizenship. Most of the afore-mentioned services have, in fact, been the result of community cooperation and development.

The Associated Students of Stanford University recognized the potentialities and need for self-government at the Village by appointing a committee to study and recommend a form of student government for the Village. The Report made during the summer of 1946 to the Dean of Students has been incorporated into the Constitution for the student government of single students of Stanford Village. The Preamble of this document states:

"We, the students of Stanford Village, in order to exercise the fundamental precept of democracy, which is self-government; to develop qualities of democratic leadership; to integrate the area known as Stanford Village with the campus groups of Stanford University; to form an executive-legislative body representing all the students of the Village; and to build an efficient organization for furthering relations between administration and students, do hereby organize and establish this constitution."

Each House is responsible for developing its own House organization, rules and regulations. House Presidents, Treasurers, Social Chairmen, and Athletic Chairmen are elected in each House. The maximum size of House membership is one hundred and sixteen men; the minimum is fifty one men. The House Presidents come together in bi-monthly meetings of the Village Council where over-all Village problems are discussed.

Through the Social Chairmen, Athletic Chairmen, Intra-Mural Sports Chairmen of the University, and campus social groups there has been developed an extensive activity program. Informal dinner-dances, House picnics, faculty guest nights, informal Village Barn-dances, and get-togethers in the Village Club have been popular. Each House collected a \$2.00 activity fee from each member every academic term. These funds were deposited with the Associated Students Office and are used in accordance with prescribed rules in furthering their House activities.

Athletic Chairmen in each House have developed extensive participation in intra-mural sports: touch-football, basketball, tennis, and volleyball. Bridge tournaments have sprung up. A camera club with its own developing room attracted over a hundred participating members. Foreign students and interested American students organized an International Club which met every Monday night. Family couples started House picnics in their backyards. The Village community became alive.

The apartment area, for three hundred veteran student families developed its Village Family Council with one representative from each service-yard area where it became evident that neighbors became acquainted over the clotheslines and back-porch. Logically enough, this group has become exclusively a wives government, a matriarchy, though it is open to all. The student husbands remain home studying and tending their small children. The Village Family Council concerns itself with problems which are new to educational institutions: Well-Baby Clinics, Garbage Disposal, Nursery Schools, Grocery Stores and Meat Markets, Bendix Self-Service Laundries, Furniture and Layette Exchanges, Menu Planning, Pre-natal care, and even the care of cats and dogs. Community vegetable gardens have been developed. Lawns were planted and barracks were brightened by student cultivated flower gardens. Children in sandboxes and children riding tricycles through the Village Civic Center add realism and family life to the Village.

In Stanford Village, the students rule and regulate their own behavior. Student government develops and enforces their own House and Village rules and regulations. In a community of twenty-four hundred people, two personnel workers - the Resident Counselor and Assistant - aided by student House Counselors, cannot possibly take the place of a Headquarters Company of military officers, military police, and enlisted men such as formerly controlled the military installation which was here before Stanford Village. The Personnel Program for Stanford Village does not contemplate the possibility. There has never been the problem of how to encourage student veterans to recognize and accept their role in a peacetime society. Self-government and behavior in the Village have been of the highest order and give promise of a real experience in tolerance and understanding for the larger society.

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| Thomas L. Harris | Carlos Manzanares | J. C. Sun |
| Col. John D. Hartigan | J. G. Marks | Sung Nien-ts'u |
| Walter Hasenclever | Harry Marshall, Jr. | Lt. Col. Lee Tesesco |
| James A. Healy | John W. Masland | Jack B. Tenney |
| Lt. Margot J. Herrmann | Mrs. Dare Stark | Dr. Dorothy Thompson |
| Yoshii Higashiuchi | McMullin | Dr. E. H. Thompson |
| Dr. P. H. Ho | Mrs. Eliot G. Mears | Col. Elliott R. Thorpe |
| Lt. Gen. John R. Hodge | Roger Meire | Dr. Donald B. Tresidder |
| Paul E. Holden | Dr. Alexander Melen | T'ien Hsiu |
| Herbert Hoover | Dr. Jacob Ter Meulen | Tso Ming-ch'e |
| Hsieh Ch'ng-yau | Stanislaw Mikolajczyk | Dr. Y. T. Tsur |
| Patrick Hsieh | Jaume Miravittles | T'u I-fang |
| Hsu Chih-chen | Major Merrill Moore | Lowell Turrentine |
| Huang Hua | Mrs. H. C. Moreno | M. A. Raul Vallejos |
| Y. Y. Huang | B. Q. Morgan | Manfred Vernon |
| Emil Hurja | Nathan Most | Dr. N. Veros |
| V. N. Ipatieff | Dr. Pao-san Ou | Wayne S. Vucinich |
| Mrs. Rose Isaacs | Ali Paksoy | Maurice Votaw |
| The J. M. Foundation | Mrs. Alice Park | Wang Yun-wu |

Lane D. Webber	Zugmunt Wojciechowski	Gen. Wu T'ieh-ch'eng
James C. M. Wei	Wong Ling Kui	Wu Tsung-fen
Mrs. Giles Whiting	William P. Wreden	C. Y. Yang
Fred Wickett	Arthur Wright	Yang-K'un
Dr. Ray Lyman Wilbur	Wu Chu-jen	Francis Yao
Dr. Bailey Willis	Dr. Wu K'o-kang	Hobart Young
Brig. Gen. C. A.	Mme Wu Pei-fu	Dr. Yu Ching-jang
Willoughby	Wu Shang-ying	William E. S. Zuill

Donors for Other Special Purposes

Gifts for other purposes, including Memorial Church, Museum, and Art Gallery, Stanford Futures Fund, Public Exercises, Administrative Offices, and funds whose designation has not been determined, were made by:

Mary Jean Haynes Allen	Mrs. M. P. Hall	Herbert N. Parkhurst
Associated Students	Mrs. Arthur C. Harris	S. F. Pellas
George H. Atkinson	George D. Hart	Peninsula Newspapers, Inc.
Mr. and Mrs. Harold M. Bacon	Mr. and Mrs. Lloyd Henley	Agnes D. Peters
Mrs. John Bakewell, Jr.	William D. Henley	Longueville H. and Marjorie S. Price
Estate of Mary D. Barber	Mr. and Mrs. Kenneth W. Herrick	Mr. and Mrs. Edward W. Rice
Gale R. Blosser	Albert J. Hettinger, Jr.	Mr. and Mrs. A. E. Roth
Elizabeth M. Braly	Mrs. Brodie Higby	Katharine E. F. Ryan
Esther E. Brown	Leslie W. Hills	Marie L. Schwabacher
Allen H. Burgi	Dr. Emile Holman	Marybeth M. Smith
The Cardinals	Mr. and Mrs. William A. Holt	Noel H. Stearn
Ross H. Chamberlain	Warren E. Hudelson	Estate of Lucie Stern
H. H. Chandler	Dr. Edwin Janss	Ann Stuart
Class of 1946	Mrs. David Starr Jordan	Mr. and Mrs. Graham H. Stuart
Bessie R. Coffin	Mr. and Mrs. Charles Kendrick	Nesta M. Thompson
James G. Coffin	Allan Salz Klauber	Dr. and Mrs. Donald B. Tresidder
Allan H. and Inez P. Crary	Robert M. Levison	Caroline Unander
Gordon B. and Beatrice B. Crary	Mrs. James E. Lewis	David H. Walker, Jr.
Mrs. David A. Curry	Mrs. Clarisse Haberfelde Main	Kenneth R. Walker
Sylvia J. Davis	Mrs. Percy Alvin Martin	Walton A. Wickett
Mrs. Archibald R. Dennis	A. A. Martinez	John H. Wiggins
J. C. Dye	Mr. and Mrs. Earl McKenzie	Mrs. Edwin A. Wilcox
Mr. and Mrs. Paul C. Edwards	John F. McPeak	Thomas and Dora Williams
William W. Edwards	Merrill Lynch, Pierce, Fenner, and Beane	Howard C. Wilson, Jr.
Mr. and Mrs. Arthur L. Erb	Nancy Milbank	George U. Wood
Forest Park Home Foundation	Lydia Pearce Mitchell	Orton C. Woodhead
W. P. Fuller, Jr.	Clara M. J. Moore	Anonymous
Mrs. Heath Scott Gerity	Leonard J. Moore, Jr.	
John B. Goodwin		

Gifts of Previous Years

The many gifts of previous years, which have established funds producing annual income or which have purchased equipment and built buildings, have in this year continued to be of great usefulness and should be recognized as making important annual contributions to the life of the University.

The entire plant and its equipment, which again this year has served so greatly, came from gifts. The Ruth Lucie Stern Research Building of the Medical School continues to make an invaluable contribution. The Lane Medical Library continues to serve Stanford medical students and faculty. Commencement exercises and other major events each year are held in the lovely Frost Memorial Amphitheater. The School of Education is continuously grateful to the Cubberleys for the building which houses the school. There is the Harris J. Ryan High Voltage Laboratory, the Hoover Library, Memorial Hall, the Stanford Union—all of these given and built in addition to the founding grant. And, of course, the entire campus and the quadrangles thereon may be considered as given anew each year by Senator and Mrs. Stanford.

Then there are the endowment funds, living gifts of previous years, bringing in one-half of the annual income of the University. These funds are:

UNRESTRICTED ENDOWMENTS

Leland and Jane Lathrop Stanford	Joseph Horton Kile
Wallace M. Alexander and Timothy	Leland H. Lowenson
Leonard Barker Memorial	Fred R. Muhs, Jr.
W. W. Carson	Mr. and Mrs. R. E. Naftzger
Jean Conrad	Lawrence Newman
Dalmo Victor, Inc.	William Ohlandt
Earl S. Douglass	E. S. Pillsbury
Bertha E. Dworzek Memorial	J. O. Reavis
Fred R. Estes	Gussie and Morris Rosenberg
George E. Farrand	Walter Samson
Mary Virginia Ford	Dr. Walter G. Schulte
Frederick Herbert Gates Memorial	Edith B. Shuffleton
Leonard C. and Dorothy P. Hammond	Stanford New Endowment
Theodore J. Hoover	Sutherland, Tucker and Bentley Trust
Mrs. Walter Hunsaker	Theodore E. Swigart
Jack and Heintz, Inc.	Anonymous
Lucia N. Keniston	

SCHOLARSHIP AND FELLOWSHIP ENDOWMENTS

George Porter Baldwin Foundation	August Berner Scholarship
Scholarship	Bidwell Memorial Scholarship
Beach Thompson Memorial Fund	Captain Quentin R. Birchard Memorial
Scholarship	Guy C Bowman Scholarship
Francis William Bergstrom Fund	

- Charlotte Blake Brown Memorial Fellowship
 Leonora Schopbach Brown Memorial Scholarship
 Margaret Byrne Scholarship
 William W. Carson Scholarship
 Buddy Cass Scholarship
 L. W. Clark Scholarship
 The Cleaveland Fund Scholarship
 E. C. Converse Scholarship
 Frederick Bronson Cooley Memorial
 Mabel Hyde Cory Scholarship
 George E. Crothers Law School Scholarship
 George Bliss Culver, Jr., Memorial Scholarship
 Harry S. and Alice U. Derby Scholarship
 W. F. Detert Scholarship in Engineering
 W. J. Dickey Scholarship
 Henry G. Dodds Scholarship
 Robert Dofflemeyer Scholarship
 George W. Dowrie Scholarship in Finance
 John Cushing Duniway Fund
 Orrin W. Dunn Scholarship
 Dworzek Memorial Fund
 Leonard Daniels Ellis Memorial Scholarship
 The Alfred Esbergs' Fund
 Hiram Cornell Fisk Scholarship
 Edward Curtis Franklin Testimonial Fellowship
 Florence Hecht Fries Scholarship in Medicine
 George E. Gamble Scholarship
 Frank Gard Memorial Scholarship in Chemistry
 William Garland Memorial Scholarship
 Justitia Jane Campbell Glennie Scholarship
 Graduate School of Business Scholarship
 William Haas Scholarship
 John M. Haffner Scholarship
 James D. Haile Memorial Fellowship
 Nellie B. Hammond Fund for the Advancement of Knowledge and the Fine Arts
 Raymond O. Hanson Memorial Scholarship
 Estate of Blanche Harris Scholarship in Law
 Elston Mills Harrison Memorial Scholarship
 Carrie Hassler Scholarship in Medicine
 William F. Herrin Scholarship
 Clarence J. Hicks Memorial Fellowship in Industrial Relations
 Brodie G. Higley Scholarship
 Marie Crismon Hindes Scholarship in Nursing
 Edward Hopkins Scholarship
 Gladys E. Horner Scholarship
 Donald Porter Jacobs Research Fellowship
 Melville J. Jacoby Fund for Fellowships
 Eric Knight Jordan Research Fellowship in Geology
 James Richard Kelly Memorial Scholarship in Economics
 Gordon Kimball Memorial Scholarship
 Lanagan Memorial Scholarship
 Dr. Jessie C. Langford Scholarship
 Abe Lewis, Jr., Scholarship
 Juliet Lee Knopp Lockwood Memorial Fund
 George Loomis Fellowship in American Literature
 Julius H. Martin Scholarship
 Frederick Dewey Michaels Scholarship
 John Pearce Mitchell Scholarship
 Robert S. and Florence Moore Scholarship
 Nathaniel Richard Morgan Scholarship in Electrical Engineering
 Clelia D. Mosher Fund for Benefit of Women Students
 Russell Albert Moyse Fellowship
 Oscar W. T. and Mary Strowbridge Muellhaupt Memorial Scholarship
 The Dick Munroe Memorial Fund
 Henry Newell Scholarship
 Dr. Francis J. Nicholson Scholarship
 Nurses' Alumnae Association Scholarship
 Lindsay Peters, Jr., Memorial Fund
 Margaret Rogers Peterson Memorial
 John Pressley Phillips, Jr. Memorial
 George J. Presley Scholarship
 Abraham Rosenberg Graduate Research Fellowship
 Alice J. Rosenberg Graduate Research Fellowship
 Richard F. Sandwick Memorial Scholarship

San Francisco Polytechnic High
School Student Body Association
Scholarship
San Francisco Regional Scholarship
Henry W. and Jessie D. Seale
Scholarship
Senior Class Scholarship
Leon Sloss Scholarship
Louis and Sarah Sloss Scholarship
Orilla Buehler Smith Scholarship
Stanford Law Veterans Memorial
Scholarship
Leland Stanford, Jr., Memorial
Scholarship
Arthur B. Stewart Scholarship
John Maxson Stillman Testimonial
Scholarship
Parnie Hamilton Storey Memorial
Scholarship
Student Aid Endowment Scholarship
J. M. Switzer Loan and Scholarship
Catherine Whalley Sykes Scholarship
Taos Indian Fund Scholarship
Palmer Wilkinson Taylor Scholarship
John Van Steen Tolman Memorial
Scholarship in Geology
Tuition Endowment Scholarship

Los Angeles Regional Tuition
Scholarship
Clarence Urmy Award to Student
Submitting Best Poem in English
Department
Stanley Wilson Vanderburgh
Memorial Scholarship
Royall Victor Scholarship and
Fellowship
Helen Bennett Voorhees Memorial
Scholarship
Agnes Walter Scholarship
James Birdsall Weter Memorial
Fellowship
Frederick P. Whitaker Fellowship
in Chemistry
Clarke Butler Whittier Scholarship
Wilbur-Ellis Company Scholarship
Ray Lyman Wilbur Scholarship and
Fellowship
Charles W. Willard Scholarship
Henry Windt Memorial Scholarship
in Chemical Engineering
Charles B. Wing Civil Engineering
Scholarship
Julian Wolfsohn Memorial Fund
Mary Yost Scholarship

LIBRARIES ENDOWMENTS

American Relief Administration
Albert H. Baker, for Graduate School
of Business Library
Dr. Adolph Barkan, for Department
of History of Medicine and
Natural Sciences
Dr. Adolph Barkan, for Medical
Library Books
Beasley Memorial Fund
Albert Bender Rare Book Fund
Walter W. Boardman Memorial Fund
A. Borel, for Medical Library Books
Carr Business School Book Fund
Caufield Memorial Fund
Chinese Library
Class of 1903, for Purchase of Library
Books
Class of 1938, for Purchase of Library
Books
Class of 1939, for Purchase of Library
Books
Edward Coleman, for Medical Library
Books
S. Waldo Coleman, for Graduate
School of Business Library

Commission for Relief in Belgium
Cubberley Book Purchase Fund
Cubberley Memorial Library
Henry Lee Dodge Memorial for
Medical Library Books
Dole Memorial
Arthur G. Duncombe, for Journalism
Eugene Favre Memorial Shelf,
Business Library
Charlotte Ashley Felton Memorial
Finnish Relief Fund
General Library Endowment
General Library, for Biological Sub-
jects
Domingo. Ghirardelli Memorial
Book Fund
Henry Gibbons, Jr., Library of
Obstetrics and Gynecology
F. A. Golder Memorial Fund, for
Russian Revolution Research
Graduate School of Business
Publications
Luther Janna Holton, for Medical
Library Books
Ida C. Hooper Memorial Fund

- Lou Henry Hoover Memorial Fund
 Hopkins Marine Station Library Fund
 Charles Andrews Huston Memorial Book Fund
 Jewel Fund for Books, Jane Lathrop Stanford
 George R. Keast Library Fund for Graduate School of Business
 Levi Cooper Lane Library of Medicine and Surgery
 Langille Book Fund
 Dr. Julia P. Larsen Memorial Section, Lane Medical Library
 C. G. Lathrop, for Medical Library Books
 Law Book Fund, 1911 J. D. Class
 Law School Library Fund
 Life Membership Subscriptions for Medical Library Maintenance
 William A. Lowe, Business School Library Fund
 J. Henry Meyer, in Memory of Antoine Borel
 J. Henry Meyer, for Medical Library Books
- Morris Engineering Library Fund
 Nuggets Fund in Memory of Julia Watts Lawrence
 E. S. Pillsbury Endowment for Purchase of Books at Hopkins Marine Station
 Henry M. Robinson, for Hoover Institute and Library
 Solon and Jeanette Bell Shedd Memorial
 James Perrin Smith Library of Cephalopoda Memorial
 Donald Scott Snedden Library Fund
 The Horatio Ward Stebbins Book Fund in the Physical Sciences
 Robert Eckles Swain Fund
 Allene Thorpe, for Bookshelf in Dean of Women's Office
 Victor J. West Memorial Library Fund for Purchase of Books
 Dean Witter Graduate School of Business Library

SCHOOL AND DEPARTMENTAL ENDOWMENTS

- Gilbert T. Benson, for Maintenance of Dudley Herbarium
 W. K. and E. L., and Ruth and Frances M. Bowes
 Branner Memorial Association
 Ann Clare Brokaw Memorial
 C. Annette Buckel Foundation
 Margaret Byrne, for Professorship in American History
 Douglas Houghton Campbell
 Carnegie Corporation of New York, for Food Research
 Cubberley Lectureship
 William Roberts Eckart Research Fund for Mechanical Engineering
 Fairclough Fund
 Budd Frankenfield, Electrical Engineering
 Irene Hardy Prize Fund in English Verse
- Dr. Morris Herzstein Chair in Biology
 Chair in Japanese History and Civilization
 David Starr Jordan Memorial Fund for Work in International Relations
 Oldroyd Shell Collection, Department of Geology
 School of Religion
 Edgar E. Robinson Professorship in United States History
 F. J. and Josephine Rogers, for School of Religion
 Thomas Welton Stanford, for Psychic Investigation
 Thomas Welton Stanford, for Psychology and Psychic Investigation
 Emily Brinkerhoff Stone, for Experimental Psychology
 R. F. West, for Lectures on Immortality and Kindred Subjects

HOSPITAL AND MEDICAL SCHOOL ENDOWMENTS

- Adolph Barkan Foundation
 Fritz Barkan, Jr., Memorial
 Broderick Memorial Free-Bed Fund
 Peter C. Bryce Free-Bed Endowment in Obstetrics
- William W. Carson, for Care of Clinical Patients
 Marian F. Claiborne, for Free Beds
 Mary K. and Harold K. Faber Free Bed Fund for Children

David L. Farnsworth Fund
 Emilie Gilkbarg Memorial Fund
 Grateful Patients Free-Bed
 Endowment
 David Hewes Free-Bed Endowment
 for Lane Hospital
 Stetson G. Hindes II, for Free Beds
 Moses Hopkins Memorial for
 Hospital Beds
 Gladys E. Horner Cancer Research
 Foundation
 Florence Jane Fund
 Lane Medical Lecture Fund
 C. G. Lathrop, for Medical School
 Free Beds
 Kate Ashley Loomis Fund
 Medical Research

Medical Research for Cancer (Dr. L.
 A. Emge)
 Emmet Rixford Memorial Endowment
 for Medical Research in Surgery
 Nellie St. Goar Endowment for
 Medical School
 Schulte Endowment and Research
 Fund in Pharmacology and
 Therapeutics
 Flora Sharon Endowment
 Shattinger Foundation for School of
 Medicine
 Doris Clayburgh Steiner Endowment
 Valmira Fund
 E. P. Wilbur Children's Free Care
 Endowment

STUDENT LOAN ENDOWMENTS

Horace Davis Student Loan Fund
 John Laurence Frost
 Susan Leighton Memorial
 Alice M. Marriott

Lillian J. Martin
 Lulah Pafflow Memorial
 Mary Wilhelmine Williams Memorial

REVOLVING LOAN FUNDS

Alpha Omega Alpha
 Associated Students
 William Burton Barber
 Bookstore
 James Frederick and Ruby Bursch,
 School of Education
 Business School
 Chi Omega
 Class of 1906
 1920 Senior Class Fund
 1921 Juris Doctor Class
 Class of 1932
 Horace Davis
 Dean of Medical School
 Dean of Students
 Delta Gamma Memorial
 Delta Tau Delta
 John William Dobbins Encina
 Commons
 Charles A. Dukes
 Emergency Graduate
 Engineering
 John C. Erickson Memorial
 Richard Friedlander Memorial
 John Laurence Frost
 Geology Honor
 Nellie B. Hammond
 Catherine Harker Memorial

Margaret D. and Charles A. Huston
 Memorial
 Oliver Peebles Jenkins Memorial
 Barbara Larsh Jones Memorial
 Alumni Jordan Medical Scholarship
 Kellogg, for Medical Students
 W. K. Kellogg Foundation for
 Physical Therapy
 Eugene S. Kilgore Memorial
 Alice W. Kimball
 Jessie R. Kistler
 Langille Engineering
 Law Students
 Susan Leighton Memorial
 Alice M. Marriott
 Mahlon Alden Marshall
 Lillian J. Martin
 Medical Faculty Relief
 Memorial Loan Fund at Stanford
 Louise Wiepking Meyer
 Hans Christian Nelson Memorial
 Nurses Loan Fund
 Joseph R. Nutt
 Lulah Pafflow Memorial
 Palo Alto P. E. O.
 Dr. Robert Patek Memorial
 A. V. Pettit Memorial for Nurses
 Pi Lambda Theta

Mrs. George A. Pope, for Medical
Students
Frederick I. Richman
Roble Club
San Francisco Pan-Hellenic
School of Medicine
Sarah Sergis
M. C. Sloss
Alvan Smith
Everett W. Smith Memorial
Speech and Drama
Stanford Alumni Association Medical
School Graduate
Stanford Mothers' Club Memorial
Romaine Josephine Stanley
Ruth Stern
Student Aid
William Allen Sullivan

Mrs. Ernest J. Sultan
John M. Switzer Loan and Scholarship
United States Government Student
War
Dr. Phil H. Weber
Weingartner Scholarship
The Mary Wilhelmine Williams
Memorial
Women's Auxiliary of the Alameda
County Medical Association
Women's Auxiliary of the San Fran-
cisco County Medical Society
Women's Auxiliary to the San Mateo
County Medical Society
Women's Student
William T. Yeoman Scholarship and
Loan Fund
Jacob Yost

FUNDS FUNCTIONING TEMPORARILY AS ENDOWMENTS

Gordon Blanding, for Medical School
Allan H. and Inez P. Crary Fund
Gordon B. and Beatrice B. Crary Fund
Frances Coffin Edwards Medical
Science Building Fund
Electronics Laboratory Building Fund
Laurence Frost Amphitheater
Lane Medical Library Reserve Fund
Grace McCoskey Fund
Julian J. and Adele H. Meyer Loan
Fund

Music Building Fund
Restoration Fund Memorial Church
Spire
M. C. Sloss 75th Birthday Fund
Lloyd Melvin Smith Law School Fund
Stanford Clinics Auxiliary and San
Francisco Maternity Hospital
Endowment
Stanford Futures Fund
Victor J. West Memorial

FUNDS SUBJECT TO LIVING TRUST AGREEMENTS

John J. and Maude E. Bourn
Student Fund
Jacob Brack Memorial
John W. Dobbins Encina Commons
Loan Fund
Field-Hotaling Fund
Myrna B. Freman Scholarship
Louis S. Haas, for Research in Child
Psychology
James N. Hayes Memorial
William Armfield and Ethel Rhodes
Holt Fund
Margaret D. Huston Scholarship
Ernest Gale Martin Memorial
Scholarship
The Charles D. Marx and H. C.
Moreno Memorial
John Pearce Mitchell Fund

Lydia Pearce Mitchell Fund
Nathaniel Richard Morgan Fund
Longueville and Marjorie Price Fund
Harris J. and Katharine E. F. Ryan
Annuity Fund
Claude Clifford Ryder Medical
Scholarship
Estate of Solon Shedd
Terman Scholarship
Donald B. and Mary C. Tresidder
Fund
Ephraim and Amelia Weiss
John H. Wiggins Fund
Elizabeth Moody and Rhona Williams
Fund
Thomas and Dora Williams Fund
Maria Wolters Fund
Anonymous

TRUST FUNDS, PRINCIPAL HELD BY OTHERS

Ella P. Briggs Scholarship Trust	Herzstein Medical Lecture Trust Fund
Evelyn Fannie Briggs Scholarship Trust	Timothy Hopkins Trust Fund
Dr. Clinton Cushing Free-Bed Trust Fund	Dorothy Metz Trust Scholarship
	Leland Stanford, Jr., Memorial Trust Scholarship

OTHER RESTRICTED ENDOWMENTS

W. K., E. L., Ruth G., and Frances Bowes	Bed Endowment, Lane Hospital
Estate of F. A. Golder	George and Vivian Wagner Fund for
Nurses' Alumnae Association Free-	Maintenance of the School of
	Education Building

A COMPLETE ACCOUNTING OF GIFTS BY DESIGNATION AND AMOUNT
IS IN THE PERMANENT RECORDS OF THE UNIVERSITY

REPORT OF GIFTS TO STANFORD

For the Fiscal Year

SEPTEMBER 1, 1946, THROUGH AUGUST 31, 1947

The total \$1,695,937.11 in gifts was designated by the donors as follows:

	For Current Use	For Endowment	Total
Unrestricted Endowment	\$	\$ 22,545.05	\$ 22,545.05
Unrestricted for Current Use	62,321.66		62,321.66
School of Biological Sciences	6,858.15		6,858.15
Graduate School of Business	6,016.00	6,243.50	12,259.50
School of Education	6,151.72	1.00	6,152.72
School of Engineering	18,668.08	14,707.75	33,375.83
School of Humanities	69,396.33	2,000.00	71,396.33
School of Law	50,119.51	22,584.45	72,703.96
Libraries	126,441.41	5,052.12	131,493.53
School of Medicine	202,649.02	177,206.67	379,855.69
School of Mineral Sciences	36,359.10	100.00	36,459.10
School of Physical Sciences	73,891.50	64,841.23	138,732.73
Physical Therapy	82,412.21		82,412.21
Physical Education and Athletics ..	4,336.50		4,336.50
School of Social Sciences	100,129.90	53,099.07	153,228.97
<hr/>			
General Scholarships, Fellowships, Grants-in-Aid and Student Loan Funds	39,456.84	107,315.74	146,772.58
All other'	142,993.29	192,039.31	335,032.60
<hr/>			
Totals	\$1,028,201.22	\$667,735.89	\$1,695,937.11

\$208,713.09 of the above total was received through the Annual Appeal, the annual giving program from alumni. The balance was in the form of special gifts and bequests.

REPORT OF THE GENERAL SECRETARY

Fiscal Year 1946-1947

Large volume of donors and the second highest year in amount received characterized the 1946-47 gift program. The large increase in number of donors in 1945-46 was maintained in 1946-47, thus giving assurance that it was growth and not just an unusual year.

The following tables are self-explanatory:

<u>Total Gifts</u>	<u>1946-47</u> (second highest year)	<u>1945-46</u> (third highest year)	<u>1944-45</u> (all time high)
For Current Use	\$1,028,201.22	\$ 845,959.00	\$1,122,543.85
For Endowment	<u>667,735.89</u>	<u>801,702.45</u>	<u>2,277,566.15</u>
Totals	\$1,695,937.11	\$1,647,661.45	\$3,400,110.00

<u>Donors and Donations</u>	<u>1946-47</u>	<u>1945-46</u>	<u>1944-45</u>
Total number of donors	6,091	6,148	
Total number of donations	6,687	6,914	3,523

<u>Designation by Schools</u>	<u>For</u> <u>Current Use</u>	<u>For</u> <u>Endowment</u>	<u>Total</u>
Unrestricted	\$ 62,321.66	\$ 22,545.05	\$ 84,866.71
Designated for Schools:			
Biological Sciences	6,858.15		6,858.15
Business	6,016.00	6,243.50	12,259.50
Education	6,151.72	1.00	6,152.72
Engineering	18,668.08	14,707.75	33,375.83
Humanities	69,396.33	2,000.00	71,396.33
Law	50,119.51	22,584.45	72,703.96
Libraries	126,441.41	5,052.12	131,493.53
Medicine	202,649.02	177,206.67	379,855.69
Mineral Sciences	36,359.10	100.00	36,459.10
Physical Education and Athletics	4,336.50		4,336.50
Physical Sciences	73,891.50	64,841.23	138,732.73
Physical Therapy	82,412.21		82,412.21
Social Sciences	100,129.90	53,099.07	153,228.97
Scholarships, Fellowships, Grants-in-Aid, and Student Loan Funds (unrestricted as to School)	39,456.84	107,315.74	146,772.58
All Other	<u>142,993.29</u>	<u>192,039.31</u>	<u>335,032.60</u>
Totals	\$1,028,201.22	\$667,735.89	\$1,695,937.11

Designation by Purpose

Current Funds:

Unrestricted, except as to School	\$ 286,247.69	
Scholarships, all types	61,143.52	
Fellowships, all types	100,969.20	
Student Loans, all types	16,254.50	
Student Assistance, all types	5,005.77	
Prizes, all types	225.00	
Salaries and Assistance	29,100.00	
Lectures	1,000.00	
Research Equipment	437.00	
Collections and Exhibits	470.72	
Building Construction	99,574.86	
Building Improvement	5,505.00	
Departmental Equipment	3,100.00	
Maintenance of Physical Properties	84.63	-
Libraries	5,452.84	
Books	29,221.22	
Publications	1,000.00	
Records	160.00	
Assistance of Patients	17,313.60	
Free Beds	5,309.40	
Clinical	1,630.00	
Travel	673.00	
Conferences	650.00	
Research	258,428.55	
Institution of New Departments	17,320.17	
Various Purposes	<u>82,093.81</u>	
Subtotal, current funds		\$1,028,201.22

Endowment Funds:

Unrestricted, except as to School	\$ 287,896.34	
Scholarships, all types	262,094.83	
Fellowships, all types	35,065.58	
Student Loans, all types	2,187.40	
Prizes, all types	200.00	
Professorships and Chair		
Endowments	39,030.90	
Research Equipment	199.17	
Building	3,851.61	
Libraries	7,322.12	
Books	645.00	
Assistance of Patients	2,500.00	
Research	<u>26,742.94</u>	
Subtotal, endowment funds		<u>667,735.89</u>
Total of Gifts		\$1,695,937.11

Gift Totals by Months

	<u>Annual Appeal</u>	<u>Special Gifts</u>	<u>Monthly Total</u>	<u>Cumulative Total</u>
Sept.	\$ 2,187.25	\$ 95,547.64	\$ 97,734.89	\$ 97,734.89
Oct.	7,059.40	141,173.24	148,232.64	245,967.53
Nov.	8,413.63	87,908.68	96,322.31	342,289.84
Dec.	77,236.87	232,520.61	309,757.48	652,047.32
Jan.	17,898.26	178,091.48	195,989.74	848,037.06
Febr.	22,478.16	52,483.72	74,961.88	922,998.94
March	21,992.63	172,769.76	194,762.39	1,117,761.33
April	24,015.57	101,043.38	125,058.95	1,242,820.28
May	11,922.05	45,464.42	57,386.47	1,300,206.75
June	6,033.89	124,038.63	130,072.52	1,430,279.27
July	5,693.90	130,569.23	136,263.13	1,566,542.40
Aug.	3,781.48	125,613.23	129,394.71	1,695,937.11

Donors of the 22 largest amounts are as follows:

	<u>Size of Gifts</u>
Rockefeller Foundation	\$ 156,016.07
National Foundation for Infantile Paralysis	102,046.99
Estate of Lucie Stern	92,156.37
Thomas and Dora Williams	65,030.00 *
Mr. and Mrs. Silas H. Palmer	50,678.13
Mr. and Mrs. William A. Holt	50,050.00
Estate of Mary D. Barber	46,905.91
Estate of Francis William Bergstrom	40,856.61
Estate of Francis Shook	38,102.46
Sperry Gyroscope, Inc.	31,000.00
James Foundation of New York	30,000.00
U. S. Public Health Service	27,064.93
Estate of Lionel M. Maurice	25,603.94
Mr. and Mrs. Charles Kendrick	25,500.00
Estate of Mrs. Irene B. Dernham	25,000.00
American Cancer Society, Inc.	21,682.50
Mrs. R. M. Loeser	20,025.00
George E. Gamble	18,487.50
George F. Volkmann Trust	15,000.00
R. B. Bidwell	15,000.00
Dr. Edward H. Jones	15,000.00
Forest Park Home Foundation	15,000.00
	\$ 926,206.41
Total of other gifts of \$500 and over	602,023.53
Total of 6371 gifts from 6261 donors of \$1 to \$500	167,707.17
	\$ 1,695,937.11

* \$65,000 of this represents evaluation of a gift of a previous year, but not recorded in amount in that year.

Source of Gifts by Type of Donors

From Living Individuals	\$ 772,026.51
From Requests	348,675.54
From Foundations	346,634.95
From Industry and Business	122,744.42
From Associations, etc.	64,191.92
From Other Sources	<u>41,663.77</u>
	\$1,695,937.11

Memorial and Honorary Gifts

There were 643 donors who contributed \$524,396.97 in the form of memorials. Some of these were established by living gifts on the part of surviving members of the family, or friends; Others were established by bequests.

Annual Appeal

The annual giving program again received generous support from alumni. The figures indicating extent of participation are in terms of the number of separate donations rather than number of donors, since figures for the years 1944-45 and preceding are available in this form only. The number of individual donors is, of course, somewhat smaller because of multiple gifts by some individuals. Thus, although the number of donations for 1946-47 is slightly smaller than for 1945-46, the number of individual donors is slightly higher and the amount of money is considerably increased.

Stanford alumni participation in the annual giving program still is far below that of other institutions which have strong programs. For example, Stanford has a participation of approximately 15% of its alumni; Dartmouth has 60%, Yale 40%, M.I.T. 29%, Cornell 25%. Although there is some difference in the definition of an alumnus, and in the composition of the various alumni bodies, which probably somewhat lowers Stanford's relative position, nevertheless there is ample room for improvement. The fact that the Stanford Fund is young in comparison to the others, plus the fact of the phenomenal increase beginning in 1945-46, indicates that such improvement may be anticipated.

<u>Year</u>	<u>Number of Donations</u>	<u>Amount</u>
1936-37	1,376	\$ 32,142.02
1937-38	2,449	38,353.33
1938-39	2,725	48,126.17
1939-40	2,811	29,763.63
1940-41	3,046	50,000.00
1941-42	2,554	45,838.00
1942-43	2,092	54,873.00
1943-44	1,609	40,060.19
1944-45	2,727	121,121.91
1945-46	6,140	178,303.68
1946-47	5,976	208,713.09

Alumni Relation to Giving

The importance of alumni participation in the gift program is clearly revealed in the following table. While there is no way of measuring the influence of alumni in bringing gifts to Stanford from individuals who are not alumni and from organizations, there can be no doubt that this has been a major factor over and above the direct contributions by alumni themselves. Therefore, many of the gifts classified as "non-alumni" may be considered as being alumni-prompted.

<u>Relationship to Stanford</u>	<u>Number of Gifts</u>	<u>Total</u>
Alumni:		
Current Student	67	1,540.33
Undergraduate--degree	2,427	236,921.84
Undergraduate--non-degree	1,088	72,476.35
Graduate--degree, Stanford undergraduate	1,004	73,299.73
Graduate--degree, not Stanford undergraduate	520	13,795.33
Graduate--non-degree, Stanford undergraduate	447	28,323.45
Graduate--non-degree, not Stanford undergraduate	329	2,552.42
Subtotals	5,882	\$428,909.45
Non-alumni:		
Spouse of Alumnus	21	17,321.19
Child of Alumnus	1	2.50
Parent of Alumnus or Current Student	67	81,112.31
Other *	716	\$1,168,591.66
Subtotals	805	\$1,267,027.66
Grand Totals	6,687	\$1,695,937.11

* Includes individuals with no immediate family or official connection with Stanford, foundations, industry, and associations, the latter including group gifts from current students, alumni organizations, etc.

Source of Gifts by Geographic Distribution of Donors

Of the \$1,695,937.11 total of 1946-47 gifts, \$1,108,539.89, or 65% of the total, came from 55 of the 58 counties within California. The counties of San Francisco, Santa Clara and Los Angeles again topped the list, accounting for \$914,483.34, which is 82% of the California total and 54% of the grand total of gifts. Gifts were received from every state and territory of the United States. From New York again came the most sizeable total outside of California, \$398,464.21, which represented 276 donations from 244 donors; this was 70% of the \$567,771.73 received from territories and states other than California, and 24% of the grand total of gifts. From donors in other countries, Stanford received \$19,625.49, or 1% of the grand total of gifts.

Relation of Donors by School in Which They Were Enrolled

Approximately 5,200 of the alumni donors had, during their work at Stanford, affiliation with a particular School. This is an increase of about 100 over 1945-46. The distribution of these, both as to number and amount contributed, is shown in the following table. It should be pointed out that the School affiliation of the donor does not mean necessarily that his gift was made to that particular School. For example, a graduate whose School affiliation was Engineering may have during the year designated his gift for some special purpose in the School of Physical Sciences. For purposes of this table, however, he is listed in accordance with the School with which he was affiliated as a student.

<u>School</u>	<u>Number of Donors</u>	<u>Amount</u>
Biological Sciences	182	\$ 2,954.00
Graduate School of Business	142	1,789.00
Education	386	3,898.00
Engineering	675	27,705.59
Health	20	88.50
Humanities	732	26,022.85
Law	381	74,279.21
Medicine	598	143,114.55
Physical Sciences	481	80,793.58
Social Sciences	<u>1,618</u>	<u>62,722.67</u>
	5,215	\$423,368.55

Individual Donors by Class Affiliation

The classes of 1940, 1946 and 1941, in that order, led the list in number of donors, all having more than 180. Every class was represented, including the classes of 1948, 1949, and 1950, which are still in school. These figures cover only direct gifts by individuals and do not include group gifts such as those made through the Associated Students, alumni organization, etc.

Faculty, Staff and Trustee Gifts

\$78,757.55, or 5% of the total amount of gifts, came from former and current faculty, staff and trustees.

The hundreds of volunteers in the gift program continue to be its greatest strength. Their services in promoting gifts to Stanford are immeasurable. Listing them is impossible, but a tribute to their work cannot be overstated.

STANFORD ASSOCIATES again made major contributions to the gift program and to many phases of the University's public relations. In addition to the committees which have operated for a number of years, a new committee was established in 1946-47--the Placement Committee. This committee has worked out an effective program of cooperation with the University Appointment Service.

Two outstanding dinners for Associates and "R" Plan members were held during the year--one in San Francisco, and the other in Los Angeles.

Officers and Committees for the year have been:

OFFICERS 1946-47

L. H. Roseberry	President
Homer R. Spence	First Vice-President
Frank Hinman	Second Vice-President
James T. Langford	Secretary
Lloyd C. Stevens	Treasurer
Thomas P. Carpenter	Assistant Secretary

BOARD OF GOVERNORS

Charles A. Beardsley	Gilbert H. Jertberg
E. Forrest Boyd	Henry G. Jorgensen
Reginald E. Caughey	James T. Langford
Earl S. Douglass	Joel D. Middleton
Arthur T. George	Floyd A. Parton
Richard E. Guggenhime	C. E. Persons
Morgan A. Gunst	James H. Polhemus
Frank Hinman	Homer R. Spence
Paul E. Holden	Lloyd C. Stevens
William A. Holt	Frank J. Taylor
Frank F. Walker	

EXECUTIVE COMMITTEE

L. H. Roseberry, Chairman	J. Pearce Mitchell, Chairman
Earl S. Douglass	Harmon E. Cutler
Frank Hinman	Richard E. Guggenhime
C. E. Persons	C. E. Persons
Homer R. Spence	Frank K. Roberts, Jr.
Frank F. Walker	

MEMBERSHIP COMMITTEE

PLACEMENT COMMITTEE

Earl S. Douglass, Chairman	
Carl Breer	Paul E. Holden
Allan H. Crary	Alonzo W. Peake
Sennet W. Gilfillan	D. J. Russell
Hubert H. Hall	George Wagner

EXCEPTIONAL STUDENT COMMITTEE

Avery J. Howe, Chairman
 E. Forrest Boyd
 George E. Gamble
 Arthur T. George
 Sennet W. Gilfillan
 Mrs. A. S. Kalenborn

Mrs. S. B. Morris
 Byrl R. Salsman
 George F. Sensabaugh
 John M. Stalnaker
 Milton M. Teague
 Oscar A. Trippet

AMBASSADORS 1946-47

Auburn and Placer Junior College
 Azusa and Covina
 Bakersfield
 Beverly Hills
 Burlingame and San Mateo
 Corona
 Famosa
 Fresno
 Glendale and Burbank
 Grass Valley and Nevada City
 Hanford
 Inglewood, Redondo Beach
 and Hermosa Beach
 Lodi
 Los Angeles
 Oakland, Alameda, Berkeley,
 Piedmont and San Leandro
 Ontario and Chaffey Union
 College District
 Palo Alto
 Pasadena
 Redwood City
 Riverside
 Roseville
 Sacramento and Elk Grove
 San Bernardino
 San Diego
 San Francisco
 San Luis Obispo County
 Santa Cruz
 Santa Rosa
 Ventura and Oxnard
 Yuba City and Marysville
 Denver, Colorado
 Honolulu, T. H.
 Chicago, Illinois
 Bozeman, Montana
 Butte, Montana
 Omaha, Nebraska
 New York City, N.Y.
 Portland, Oregon
 Salt Lake City, Utah
 Seattle, Washington
 Spokane, Washington
 Tacoma, Washington

Mr. James R. Johnson
 Mr. Leland Poage
 Mr. J. H. Beach
 Mrs. Windsor Chase Lynch
 Mrs. C. E. Steinbeck
 Mrs. Robert L. Willits
 Mrs. Edward C. Phillips
 Mrs. Lloyd Henley
 Mrs. Andrew R. Boone
 Mr. George I. Ellsworth
 Mrs. Bernard Coe

Mr. Vernon Spencer
 Mr. Reuben P. Rott
 Mrs. Samuel B. Morris

Mrs. Harold T. Avery

Margaret Tangeman
 Mrs. F. K. Murray
 Mrs. James T. Wood
 Mrs. B. E. Myers
 Mr. Thomas E. Gore
 Mrs. F. G. Graham
 Mr. Edward Hyatt
 Dr. Walter Pritchard
 Mr. Leroy A. Wright II
 Mrs. Charles A. Christin
 Hon. Ray B. Lyon
 Mr. Emmet C. Rittenhouse
 Mr. Finlaw Geary
 Mr. Harold S. Anderson
 Mrs. Carey P. Taylor
 Mrs. Randolph S. Sizer
 Mrs. H. A. R. Austin
 Mr. Byron Harvey
 Mrs. R. H. Elliott
 Mrs. Stockton Veazey, Jr.
 Mr. Edward J. Phelps
 Mr. John M. Reilly
 Mrs. Estes Snedecor
 Mrs. O. N. Friendly
 Miss Mary Bliss Maxwell
 Mr. Philip S. Brooke
 Mrs. William B. McCreery

KNOW YOUR STANFORD COMMITTEE

Robert M. Levison, Chairman	Floyd A. Parton
Reginald E. Caughey	C. E. Persons
Arthur T. George	Lloyd C. Stevens
K. C. Ingram	John A. Sutro

STANFORD FUND: Annual Appeal Committee

K. C. Ingram, Chairman
 Louis B. Lundborg
 E. J. McClanahan
 Herbert K. Reynolds
 Neill C. Wilson

Special Gifts, Trusts and Bequests Committee

Morgan A. Gunst, Chairman	Percy L. King
E. Forrest Boyd	Russel V. A. Lee
Reginald E. Caughey	John W. Mailliard, Jr.
Allan E. Charles	Joel D. Middleton
Ben C. Dey	C. E. Persons
Earl S. Douglass	Lloyd C. Stevens
David E. Faville	F. E. Terman
Louis Ferrari	Frank F. Walker
Richard E. Guggenheimer	Brayton Wilbur
George D. Hart	Percy A. Wood

Publicity and press relations have taken a real step forward under the direction of Frederic O. Glover, who assumed his post as Director of Information in November, 1946. More Stanford stories have been released than in any year before, and relations with the local and national press have improved markedly. The range and quantity of regular press releases is revealed in the following table. This does not show many stories, particularly accounts of research, in cases where newspaper science writers were brought to the campus to get the story and pictures direct.

News Releases by Type of Subject

Faculty Appointments	37
Gift Announcements	11
Public Events (including art and music)	150
Science and Research (including Stanford Research Institute)	19
Departmental Activities (exclusive of research)	51
Administrative Announcements (housing, enrollment, employment, Village, etc.)	46
Faculty Activities, Speeches and Honors	145
Student Stories, (including veterans and graduation)	63
Conferences and Meetings	77
Stanford Press	9
Visitors to Campus	7
Total	615

A cross section of the Stanford news of the year is shown in a list of the titles of some of the stories released:

Establishment of Stanford Research Institute
 Ionosphere researchers listen to Giacobini-Zinner meteors
 Loring isolates pure polio virus
 Research Institute gets \$150,000 grant for natural rubber research
 Creation of new School of Mineral Sciences
 Series of six stories on veterans at Stanford (what they're studying, how much it costs them to live, their geographical distribution, their mental and physical stability, their high grades, and the performance of married veterans)
 Bloch "tunes in" on the atom
 Establishment of Stanford Eye Bank
 Establishment of six Creative Writing Fellowships
 Establishment of six speech and drama "Junior Artist-in-Residence" Fellowships

Loring develops polio vaccine effective on rats
 Research Institute surveys U. S. aircraft industry
 Terman announces twenty-five year follow-up on gifted children
 Feature on international relations program in the School of Social Sciences

Field develops improved model of traveling wave tube
 Psychology Department's special research project on rehabilitation of wounded veterans

Major appointments: Kimpton as Dean of Students, Dinkelspiel as member of Board of Trustees, Rothwell as Vice-Chairman of Hoover Library, Goodier as Professor of Mechanical Engineering, Miss Brown as Acting Chief Counselor for Women, Colonel Perry as head of ROTC, McLennan as head of Obstetrics & Gynecology, Faust as Director of University Libraries

Outstanding faculty honors and activities: van Niel awarded honorary degree at Princeton's 200th birthday convocation (one of 23 internationally known scholars to be so honored); Levorsen elected president of the Geological Society of America; Kirkpatrick installed as president of the American Association of Physics Teachers; Blackwelder elected honorary foreign member of Geological Society of London; Hanna named U. S. military government consultant on re-education of German people; Brandt invited to international economics conference at Mont Pelerin, Switzerland; Timoshenko awarded sixth James Watt International Medal of Institution of Mechanical Engineers; Polya elected a foreign member of mathematical section of French Academy of Sciences; L. M. Terman made honorary fellow of Educational Institute of Scotland; Bennett named member of six man commission sponsored by National Academy of Science to aid MacArthur in democratization of scientific research in Japan; Keessing named consultant to UN Commission on Samoa; Greulich goes to Guam and Japan on research projects

Announcement of war memorial scholarship plan
 Newly organized Department of Asiatic & Slavic Languages
 Inauguration of Station KSU

Big "home-town" stories: Lower Division honors, Autumn Quarter graduation, Winter Quarter graduation, Commencement, Phi Beta Kappa, Sigma Xi

Three stories on sardine and tuna for AP (from U. S. Fish & Wildlife)
Gift of \$400,000 from Stern Estate for construction of men's residence hall
Hoover Library gets 57-crate shipment of documentary material on post-revolutionary Spain
Library gets collection of 45,000 colonial and early American newspapers
Bailey Willis writes new book, "Yanqui in Patagonia"; Ronald Hilton edits "Who's Who in Latin America"
Feature on shell collection in Geology Department
Weymouth's research on depth perception
Kuzell's research on arthritis
Expanded training program in clinical psychology
Conferences (with advances on all talks except at Business Conference, where advance texts on all talks were not available):
Alumni conferences in Portland, Seattle, Los Angeles, and campus;
Business Conference; Conference on Public Relations at School of Education
Public Events (major groupings): Tuesday Evening Series, Spring Music Festival, Friends of Music Series, Art Gallery exhibits, Weidmann dance concert, Orchesis concert, Feller lecture, Easter services
NBC-Stanford Radio Institute

In addition to news service through the regular media, the Director of Information edits Stanford Today. During 1946-47 there were four issues with a distribution of over 50,000 each.

The University Director of Information does not handle publicity for athletics, but it seems proper to pay tribute here to the outstanding news service and sports press relations job done by Donald E. Liebendorfer, News Service Director of the Department of Physical Education and Athletics.

The Alumni Review likewise is edited separately, but its high quality and the fine service it renders deserve commendation. Peter Allen is the editor.

Staff changes during the year included the following: David S. Jacobson, formerly Executive Assistant to the President, was appointed Associate General Secretary. Frederic O. Glover was appointed Director of Information.

MEMORIAL CHURCH

The Church staff consisted of George J. Hall, Chaplain; Warren D. Allen, Organist and Director of the University Choir (on leave during autumn, winter, and spring quarters); D. Sterling Wheelwright, Acting Organist and Director of the University Choir (during autumn, winter, and spring quarters); Walter J. Wilcox, Assistant to the Organist; Frankie Miles Dunn, Secretary; and Louis Stolz, Custodian.

Church services were held regularly throughout the academic year, with Chaplain Hall delivering the sermon each Sunday, except when guest chaplains were present.

During the year the Church had the privilege of having as Guest Chaplains the following distinguished men: Dr. Albert W. Palmer, of Los Angeles; Rabbi Joseph Gitlin, of Berkeley; Dr. Gerald K. Kennedy, of Lincoln, Nebraska; Dr. Buell G. Gallagher, of Berkeley; Dr. Glenn D. Puder, of Los Angeles; and the Rev. Chester B. Fisk, of Hanover, N.H.

In the autumn quarter, the Memorial Church Committee was organized. Membership of the Committee, appointed by the President, included five faculty and twenty student body members. The Committee procured readers and ushers for the Sunday services and for the Wednesday evening candlelight services. In addition, the Committee assisted in planning many special services.

A program of Christmas music was given on Sunday, December 8, 1946, the last Sunday of the autumn quarter, and the Church was filled to capacity.

During the week of February 3-9, 1947, the Committee sponsored a Spiritual Emphasis Week. Speakers for the week included Mr. James L. Kraft, Chairman of the Board of Kraft Foods Company; Mr. Arnold Grunigen, of San Francisco; and the Reverend Gerald P. Kennedy, of Lincoln, Nebraska.

On Founders' Day, President Tresidder was the speaker and many members of the Board of Trustees attended. The President and Vice-President of the Associated Students, E. Martin Anderson and Mildred Edwards, placed the memorial wreath.

On Maundy Thursday Evening approximately four hundred students attended a special service of Holy Communion. At the Easter Service, the Church was again filled to capacity and people by the hundreds were turned away. At this service a bronze cross, given in memory of Mrs. Stanford by Mr. and Mrs. Edwin T. Coman, Jr., was dedicated by the Chaplain.

An address, entitled "Ideals and Action," was given by Mr. T. V. Smith, University of Chicago, at the Baccalaureate Service on Sunday, June 15, 1947.

It should be reported that the attendance at the Sunday services has averaged one thousand, of whom 60 to 75% have been students. At the Wednesday evening services, there have been about fifty at each service.

During the year the Chaplain has made regular visits to the Rest Homes and to the Palo Alto Hospital to call on students. It is felt that this is a very important part of the Church's ministry.

A large number of weddings, baptisms, and funerals were conducted from time to time.

The following soloists and music groups have assisted the University Organist and Choir during the year: Margaret Ackerman, soprano; Frances Agnew, soprano; John D. Bowles, Jr., bass baritone; Joel J. Carter, baritone; Marjorie B. Dickinson, soprano; Marshall Odeen, baritone; San Jose State A Cappella Choir; James H. Schwabacher, Jr., tenor; Margaret D. Smitherum, contralto; Jean Seward Uppman, contralto; and Ted Uppman, baritone.

The Freshman Choir of nearly one hundred voices sang at the Pre-Registration Service on Sunday, September 22.

The University Choir sang a cappella at most of the Sunday services and at a special Easter Sunrise Service in the Frost Memorial Amphitheater on April 6. This was broadcast over NBC. The Choir also sang for a vesper service at Grace Cathedral on Sunday, April 13.

Organ recitals were given as an important part of the Memorial Church schedule. During the summer quarter, Warren D. Allen presented two organ recitals on Sunday evenings, July 6 and August 3, and nine on Thursday afternoons. During autumn, winter and spring quarters, D. Sterling Wheelwright presented twenty-four recitals, Frederick C. Kintzer presented two, and Margaret McCabe Thomas presented one. On January 28, 1947, Carl Weinrich was presented in an organ recital under the auspices of the Committee on Public Exercises on the Tuesday Evening Series.

The following soloists assisted the organists during the Thursday afternoon organ recitals: Marjorie B. Dickinson, Edna Folsom de Larios, W. Madison Taylor, and Edna C. Wheelwright.

As a part of the spring festival organized by the Department of Music, the Stanford University Choir and Richard Purvis, as guest organist, were presented in a concert in the Memorial Church on Sunday, April 20, at 7:30 p.m.

The following tables exhibit the church memberships or preferences of students entering the University in 1946-47:

Men				
Preference	Autumn	Winter	Spring	Summer
Baptist	46	10	9	21
Catholic	167	44	37	62
Christian	33	5	3	10
Christian Science	68	7	4	8
Congregational	80	3	7	13
Episcopal	218	36	15	65
Friends	10	--	--	2
Hebrew	64	14	8	23
Latter Day Saints	45	12	4	14
Lutheran	63	10	7	11
Methodist	172	33	22	47
Presbyterian	247	46	22	58
Protestant	158	34	16	45
Unitarian	14	--	3	5
Miscellaneous	42	7	6	13
	<u>1427</u>	<u>261</u>	<u>163</u>	<u>397</u>
No Preference	152	23	30	48
	<u>1579</u>	<u>284</u>	<u>193</u>	<u>445</u>

Women				
Preference	Autumn	Winter	Spring	Summer
Baptist	15	--	2	9
Catholic	48	8	3	37
Christian	5	1	--	6
Christian Science	33	--	2	7
Congregational	28	4	2	11
Episcopal	132	15	5	29
Friends	3	--	--	--
Hebrew	21	6	1	3
Latter Day Saints	11	1	--	2
Lutheran	14	2	--	4
Methodist	56	6	--	21
Presbyterian	65	14	3	28
Protestant	26	4	5	6
Unitarian	10	2	1	2
Miscellaneous	10	--	1	2
	<u>477</u>	<u>63</u>	<u>25</u>	<u>167</u>
No Preference	29	4	2	14
	<u>506</u>	<u>67</u>	<u>27</u>	<u>181</u>

MEMORIAL RESOLUTIONS

JAMES VICTOR USPENSKY
1883-1947

Stanford University, and in particular the Mathematics Department, lost a most distinguished member when, after a short illness, James Victor Uspensky passed away January 27, 1947, at the age of 63.

Professor Uspensky was born in Mongolia where his father was in diplomatic service. He was educated in Russia and spent the first part of his scientific career in that country. He attended the University of St. Petersburg, receiving in 1909 a degree equivalent to our Ph.D. and taught in various ranks in the "Institute of Engineers of Ways and Means of Communication" from 1907 to 1929. He was professor from 1911 to 1917 at the "University of Women in St. Petersburg" and also from 1917 to 1923 at the "University of St. Petersburg". In 1921 he was elected to membership in the "Russian Academy of Sciences", a distinction from which he resigned in 1930.

In 1926 Professor Uspensky came to the United States and taught for a year in Carleton College, Northfield, Minnesota. In 1927 he delivered a short sequence of lectures at Stanford University and at the University of California. For a short time he returned then to his native land but in the summer of 1929 he came again to this country and taught at the University of Minnesota. Following this engagement he accepted an invitation to come to Stanford University and was a member of our faculty without interruption from 1929 until his death.

Professor Uspensky published six books (four in Russia and two in this country) and over 50 articles in various periodicals both here and abroad. His latest book, completed only shortly before his death, is now in press and arrangements have been completed for the Spanish translation of an earlier one. Uspensky's main field of interest was the "Theory of Numbers", but his work extended to many other fields, and his knowledge and breadth of interest were extraordinary, securing for him an international reputation. He was greatly interested in the History of Science, in particular in that of Mathematics, and was well acquainted with most of the great classical works in this field, an interest which is becoming rare among modern scientists. Although Uspensky's principal interest was in abstract branches of mathematics, his general breadth of knowledge enabled him, on many occasions, to help engineers and physicists with their mathematical difficulties. During the past ten years, he took an active part in Applied Mechanics seminars and presented there many talks of great interest. He had an exceptional agility of mind which enabled him to see more than one face to most questions and take either side in any discussion - an exercise which he particularly enjoyed. In addition to his great erudition in Science and Mathematics he was remarkably versed in History and Literature, especially in the Latin and Greek classics. An example of his intellectual capacity was the fact that only three years ago he undertook the study of Spanish and had been writing and publishing mathematical papers in this language for some time.

As a teacher he followed the classical style and ideals. His presentation, whether oral or in writing, was clear, simple, logical and elegant. He was able to present the simplest ideas in a fascinating way and it is not surprising that his classes were popular and that his

young students immediately felt his qualities as a great teacher and appreciated them.

He worked, in active research and in teaching, until his very last days. In him we have lost a great scientist, a fine teacher, and a true scholar.

G. Polya
G. Szegő, Chairman
D. H. Young

Memorial Resolutions

WALTER SCHILLING
1892-1946

Walter Schilling died on Monday, December 16, 1946, in Stanford University Hospital of a coronary thrombosis. He was born in Oakland, California, on February 2, 1892, to August and Agnes Lemme Schilling. He received the degree of Bachelor of Arts from the University of California in 1919, the Master of Arts degree in 1920 from the same university, and the degree of Doctor of Medicine from Harvard University in 1924. He studied at the Neurologisches Institut of Vienna 1926-27. Since then he has been a member of the faculty of Stanford University School of Medicine and was Assistant Clinical Professor of Medicine from 1937 until his untimely death. He was a member of the American Medical Association, the American Psychiatric Association, the American Statistical Association, Sigma Xi, and Zeta Psi.

His father established a business and a reputation on the principle of giving only the best. Walter, too, was a perfectionist. Although he started in his father's business at the bottom, he soon gave himself to Medicine. His ways were quiet, peaceable, and scholarly, but his deep sense of responsibility was ever present. He might have relaxed but the drive was there. His principle was, "Dost thou love life. Then do not squander time."

After a period of teaching and practising neuropsychiatry, Dr. Schilling became attracted by the potentialities of improving statistical methods adapted to small samples encountered in medical sciences. In his published papers he made significant contributions in this field. He spent much time and thought aiding various investigators in planning their studies and in clarifying the interpretation of their observations. His was sound scholarly work, with some new ideas and promises of more, and the world was better for him. We shall miss this man.

Executive Committee
School of Medicine

**HAROLD PHILLIPS HILL
1877-1946**

Dr. Harold Phillips Hill, Clinical Professor of Medicine, Emeritus, at Stanford University, died in San Francisco on December 31, 1946. Stanford has lost a truly notable physician who contributed much to the prestige of Medicine in California.

Dr. Hill was born on August 5, 1877, in Waterbury, Vermont. His father, Dr. Merrill W. Hill, was a physician and practised in Redlands, California. Dr. Hill graduated with distinction from Stanford University in 1898 and received his degree in Medicine from the University of California School of Medicine in 1901. He taught Physiology at the University of California, interned at St. Luke's Hospital, San Francisco, and entered the practice of Medicine here in 1902.

Dr. Hill began his teaching at Stanford Medical School in 1913 when Stanford University took over the Cooper Medical College. He continued his interest in medical education and the training of physicians until his retirement from the faculty as Clinical Professor, Emeritus, in 1942. Dr. Hill was Chief of the Medical Service, San Francisco Hospital, until 1942 and Chief of Medicine, St. Luke's Hospital, from 1905 to 1946. He was a member of Phi Delta Theta, Nu Sigma Nu, Sigma Xi, and Alpha Omega Alpha. He was a Fellow of the American College of Physicians, active on the American Board of Internal Medicine, and a member of the California Academy of Medicine, and a member of the San Francisco, the California, and the American Medical Associations.

Dr. Hill, intimately known as "H.P.," was a highly respected leader of our medical community. His standards of personal honor and integrity were high to the point of austerity. His interpretation of and adherence to professional ethics were a model for all of us and he was distinguished throughout the State for his skill as a practitioner and teacher. His teaching was characterized by an extraordinary memory of patients and cases he had seen, and his clinics and teaching rounds were conducted in a practical and highly efficient manner. His work as a teacher will never be forgotten by the hundreds of students who had the privilege of working with him during their training years. Dr. Hill will be remembered as a physician who gave his patients a degree of care rarely equaled anywhere. His sense of responsibility for a patient's welfare, his indefatigable search for the cause of disease, and his efforts toward perfection in medical care were never interfered with by haste, carelessness, fatigue, or any outside distractions. His best was very good indeed.

He will be missed by his medical colleagues in California and by his hundreds of former students. He will be missed most by the thousands of people in this State for whom, in an intensely personal way, he was always "my Doctor Hill."

Executive Committee
School of Medicine

RECORDS BUREAU

The Records Bureau started the year 1946-47 with more clearly defined procedures than were possible in the first two years of operation. Our responsibilities toward our principal clients, the Alumni Association, the Director of Information and the General Secretary, had become regularized and our control file, the Index, had been completed. Our staff members had become thoroughly familiar with their separate functions.

Early in November the addressing equipment used for the work of the General Secretary was moved from the Press to Woodpecker Lodge. This move, requested by the Press, released that organization from all connection with addressing for the General Secretary. The change made necessary a quick renovation of the quarters in Woodpecker assigned to the Records Bureau and a round-up of discarded furniture. The results are good in that there is more working space than at the Press for our jobs; they are bad in that further isolation from the Quad creates communication problems; also they are bad in that the generally unattractive building and lack of lavatory facilities make many prospective employees unwilling to work there.

During the course of the year the Records Bureau undertook several new jobs. The School of Engineering requested the establishment of an addressing list of Engineering alumni. According to policies agreed upon with the Engineering School Dean, a master card file of engineers was made up from the Index and matching Addressograph plates were cut. End-of-the-quarter additions are made automatically by the Bureau. We also agreed to handle the addressing of the Pacific Spectator for the Stanford Press. Shorter addressing lists were started for the Division of Industrial Relations, the School of Education, the Engineering Faculty, the Alumni Association, the Stanford Village and the Faculty Men's Club.

The volume of addressing done in the Administration Building increased. The Alumni Association membership grew with the result that correspondingly more Alumni Reviews were addressed monthly and the Association ordered circulation of the Alumni generally on several occasions. The Press too used the general alumni lists for promotional mailings. For the first time the Records Bureau addressed the football ticket applications. In addition the addressing of the Pacific Spectator was commenced. In total, nearly 500,000 pieces of mail were addressed by our Speedamat equipment.

The principal addressing done at Woodpecker Lodge embraces the Annual Appeal and the special mailings of the General Secretary. The handling of the Annual Appeal is more convenient at Woodpecker than at the Press and is speeded accordingly. In all about 168,000 pieces of mail were addressed at Woodpecker. This figure does not count volume mailings for the Registrar which were stuffed and sorted at Woodpecker but were not addressed there.

Our regular staff was constant. Mrs. Couch, Mrs. Cromwell, Mrs. Ingalls, Mrs. Hass, Mrs. Rhoads and Mr. Goesle remained with the Records Bureau. Our student plate cutter, Mr. Pribyl, left and was replaced by Mr. Jones and our student's wife, Mrs. Shaw resigned when her husband left the University and her place was taken by another student's wife, Mrs. Wickesberg. The two women who did the Records Bureau work at the Press resigned from that organization and

joined the Records Bureau on a part time basis. Grace Hagman was added to assist them. Other women are on call to give intermittent help when we experience our seasonal peaks.

The Records Bureau needs new filing equipment for the Index and new addressing equipment. A start in purchases should be made as soon as over-all plans can be made on the kind and scope of service the Records Bureau is to give the University generally and the clients for whom lists are operated and maintained. Such plans will indicate what projects the Records Bureau should develop next and should settle related problems of the scheduling of work for clients and the charges made to clients.

RUTH TRACKSELL
Records Bureau

REGISTRAR

The acceleration in the activities of the Registrar's Office, which began with the return to the campus of the first veterans of World War II, reached a peak in 1946-47.

A large percentage of the students enrolled in the spring of 1946 had only recently begun or resumed their studies at Stanford. The proportion of those registered in the spring, who continued in the autumn of 1946, was therefore abnormally large. Of the 5,028 students enrolled in the spring, only 587, or 11 percent, received degrees in June. Consequently the number of places made available for new students by graduation was relatively very small.

In the face of an unprecedented number of applications for admission to the University for the autumn of 1946, an over-all increase in enrollment was the only means of meeting even a fraction of the demand. Although among the women only approximately one-third of the qualified candidates were admitted for the autumn, and among the men only approximately one-half of the qualified candidates, the total enrollment for the autumn quarter of 1946 reached 7,244 students, or 2,216 more than the total registration for the previous spring. This figure represents an increase of 42 percent over the previous spring and an increase of 94 percent over the previous autumn.

By quarters the total registration for the year was as follows:

STUDENTS 1946-47

	Autumn	Winter	Spring	Summer	Year
Graduates	2,402	2,361	2,392	1,684	3,464
Undergraduates	4,808	4,853	4,662	1,431	5,624
School of Naval Administration.....	34	35	23	24	57
Total	7,244	7,249	7,077	3,139	9,145

This increase, of course, required adjustments in all phases of campus life. Notable among those which were the direct concern of this office was a revision in the classroom schedule in order to accommodate additional classes. In some Upper Division and graduate courses, especially those which normally have had small enrollments, the additional students were accommodated merely by enlarging classes. In most Lower Division courses and many advanced courses, however, the faculty preferred to meet the demand by scheduling more sections for classes. In some cases the size of sections was actually reduced.

This meant that it was necessary to distribute classes more evenly throughout the day. The Committee on Schedule and Examinations, after a thorough study of the problem, revised the basic plan for the class schedule. Provisions were made for classes at 12:00 o'clock, with meals being served in the dormitories at alternative hours of 12:00 and 1:00 o'clock. Laboratory sections were distributed between morning and afternoon hours. Classes were distributed throughout the nine class hours, beginning at 8:00 A.M., and ending with the period from 4:00 to 5:00 P.M.

By this means the expanded enrollment was accommodated with surprisingly little congestion in essentially the same classroom and laboratory space which, before the war, accommodated approximately 4,000 students.

Veterans of World War II accounted for a large proportion of the total enrollment each quarter. This proportion ranged from 56 percent in the autumn to 70 percent in the summer. In addition, students were registered in a number of special programs under the sponsorship of the United States Army and the United States Navy. The total enrollment by quarters in the various veterans' programs and the various Army and Navy programs was as follows:

	Autumn Quarter	Winter Quarter	Spring Quarter	Summer Quarter
Veterans' Programs				
Public Law 346.....	3,811	3,886	3,928	2,046
Public Law 16.....	156	168	189	125
California State Program.....	72	39	41	9
Canadian Program	8	11	11	15
Oregon State Program.....	....	....	1	....
Total, Veterans' Programs.....	4,047	4,104	4,170	2,195
U.S. Army Programs				
Air Materiel Command				
(Graduate: Business)	11	11	15	14
Air Materiel Command				
(Engineering)	11	11	11	....
Air Materiel Command				
(Undergraduate)	7	6	7	3
Army (Graduate: Business).....	4	4	8	8
Army (Education)	3	3	3	....
Army Air Forces (Engineering).....	....	....	....	4
Total, Army Programs.....	36	35	44	29
U.S. Navy Programs				
N.R.O.T.C.	64	64	63	....
Personnel Administration	8	8	8	13
Aviation College Program.....	3	4	4	1
Five-Term Program	2	2	2	8
Engineering .....	....	....	....	1
Total, Navy Programs.....	77	78	77	23
Total, Veterans' Army and Navy Programs	4,160	4,217	4,291	2,247

The effect of the presence of veterans upon the average age of matriculants is evident in Table II, "Average Age of Matriculants," and Table III, "Age of Freshmen at Matriculation," which appear in the enrollment data to follow. Although a slight reduction in the age of matriculants in all classifications, as compared with 1945-46, is apparent, the average age for all undergraduate classifications was above normal.

Table I, "Comparative Total Registration," which appears under enrollment data, reveals the relative effect of new admissions and the return of

matriculated students upon total enrollment figures. It also indicates that the percentage of students who reside outside California, which has been increasing in recent years, reached almost 30 percent.

Table IX, under enrollment data, contains a summary of the degrees conferred during the year. The total number of degrees conferred, 2,003, was more than double the figure for the previous year. The number of Bachelor's degrees awarded increased 62 percent, whereas the number of graduate degrees conferred increased 197 percent. This difference is a reflection of the fact that the many veterans who entered or returned to the University in 1945 were not evenly distributed among the Lower Division, Upper Division, and Graduate Division. Those in the Lower Division and those in the Graduate Division each outnumbered the Upper Division veterans. The full effect of the influx of veterans upon the number of Bachelor's degrees conferred will probably not be felt until 1947-48.

Since 1921, records have been maintained of the survival of entering freshmen. The first part of the table which follows shows for each class the number of students admitted and the proportion surviving throughout the four successive years. It reflects withdrawals for all reasons, including military service.

SURVIVAL OF ENTERING FRESHMEN

PART I

Percentage Surviving

Academic Year Entered	Number	After One Year	After Two Years	After Three Years	After Four Years
1921-22	514	66.5	55.3	54.3	52.9
1922-23	442	71.7	63.6	60.7	56.3
1923-24	489	77.9	66.6	62.5	58.5
1924-25	531	79.1	70.2	64.2	66.0
1925-26	547	83.0	73.1	71.1	70.0
1926-27	468	78.2	73.0	66.8	65.0
1927-28	512	84.0	78.5	77.9	72.3
1928-29	431	81.2	76.8	72.2	68.7
1929-30	388	87.6	77.3	72.4	70.6
1930-31	415	83.6	69.2	68.7	67.0
1931-32	417	77.2	70.3	54.0	68.8
1932-33	445	79.3	62.2	54.8	68.1
1933-34	553	75.9	56.0	68.0	66.4
1934-35	638	72.7	72.3	67.4	66.1
1935-36	597	81.2	69.7	62.8	63.8
1936-37	663	80.1	70.6	68.0	66.5
1937-38	634	82.3	69.7	68.8	67.4
1938-39	604	81.8	72.7	65.1	59.8
1939-40	598	82.9	71.8	73.9	53.5
1940-41	628	85.2	66.7	41.3	37.3
1941-42	659	79.8	34.4	29.6	32.9
1942-43	475	45.5	37.0	37.3	59.8
1943-44	347	63.1	57.6	66.0	71.5
1944-45	493	74.8	72.0	66.3	....
1945-46	565	70.8	65.7	....	....
1946-47	826	92.2	....	....	....

SURVIVAL OF ENTERING FRESHMEN

PART II

Percentage Surviving

Academic Year Entered	Number	After Five Years	After Six Years	After Seven Years	After Eight Years
1938-39	604	59.8	59.5	60.0	63.4
1939-40	598	53.2	54.0	59.5	62.2
1940-41	628	38.2	57.6	62.7	....
1941-42	659	60.0	61.4	....	....
1942-43	475	62.9	....	....	....

Noteworthy is the fact that 92.2 percent of the freshmen who entered in 1946-47 were continuing their work at Stanford in the autumn of 1947. This is the highest such percentage on record.

The effects of withdrawal for military service were first noticed for the class entering in 1938-39. The second part of the table, which follows, reveals the effect of the return of students after an absence of a year or more. The last item of the table should be read as follows: Of the 475 freshmen who entered Stanford in 1942-43, after five years 62.9 percent had either graduated or returned to the University to resume their studies. The increase over the percentage indicated for this class after four years, in Part I of the table, represents the return of veterans during the fifth year. Referring to the entries in both parts of the table for the class which entered in 1941-42, note that while only 29.6 percent survived after three years, 33.1 percent have since returned, bringing the total after five years to 62.9 percent, and the prospect is that a normal proportion of this class will ultimately graduate.

ENROLLMENT DATA

TABLE I

COMPARATIVE TOTAL REGISTRATION

	1943-44	1944-45	1945-46	1946-47
Old students	2,164	2,175	3,669	5,861
New students	1,164	1,551	2,982	3,227
Army Specialized Training Unit.....	3,459	828	290	....
Women's Army Corps	60	....	....	....
Civil Affairs Training School.....	207	281	....	....
Civil Communications Intelligence School.....	....	104	....	....
School of Naval Administration.....	....	....	157	57
Total	7,054	4,939	7,098	9,145
Percentage of returning students.....	65.0*	58.3*	55.1*	64.5*
Number from California	2,569*	2,733*	4,727*	6,384*
Number from other states and foreign countries..	759*	993*	1,924*	2,704*
Percentage from outside California.....	22.8*	26.6*	28.9*	29.7*

* Based on civilian student population.

TABLE II
AVERAGE AGE OF MATRICULANTS

	1943-44	1944-45	1945-46	1946-47
Graduate standing	30.00	33.64	28.70	27.96
Advanced standing:				
Upper Division	21.47	21.99	23.52	23.15
Lower Division	21.18	21.02	22.28	21.73
First-year standing	17.75	18.08	19.64	19.15
Special standing	35.13	32.95	34.27	32.17
Unclassified		21.10	20.56	.....

TABLE III
AGE OF FRESHMEN AT MATRICULATION

	1943-44	1944-45	1945-46	1946-47
Under 16 years	3	3	2	0
16-17 years	61	59	33	34
17-18 years	348	404	301	328
18-19 years	172	245	250	386
19-20 years	19	26	66	98
Over 20 years	8	37	312	274

TABLE IV
DISTRIBUTION OF NEW STUDENTS

	1943-44	1944-45	1945-46	1946-47
From colleges:				
With graduate standing	244	379	1,103	1,216
With advanced standing:				
Upper Division	139	179	410	438
Lower Division	72	96	172	192
Total	455	654	1,685	1,846
From normal schools and teachers colleges..	4	10	27	24
From nursing schools .....	...	...	1	...
From junior colleges	104	114	212	240
From preparatory schools:				
On recommendation:				
Private	129	181	199	217
Public	479	590	726	905
On examination	3	6	39	8
Special students	13	11	13	6
Unclassified .....	...	3	80	...
Total	1,187	1,569	2,982	3,246

TABLE V
SUMMER QUARTER STATISTICS

	1944	1945	1946	1947
Old students	1,077	1,157	2,472	2,510
New students	324	434	611	613
Total	1,401	1,591	3,083	3,123
Graduate standing	560	668	1,478	1,686
Undergraduate standing	841	923	1,606	1,437
Total	1,401	1,591	3,084	3,123
New:				
Graduate standing	87	172	265	272
Advanced standing:				
Upper Division	40	47	110	105
Lower Division	29	27	57	80
First-year standing	165	195	175	151
Special standing	3	2	2	5
Unclassified .....	...	1	2	....
Total	324	444	611	613

TABLE VI
NEW STUDENTS OF 1946-47 AND FIRST-YEAR RECORD

No. of Schools	Type of School	No. of Matricu- lants	Average Test Score	Percentage Doing Satisfactory Work	Average Grade- Point Rating
<i>Graduate Students</i>					
276	Universities and colleges	1,175	...	...	...
27	Foreign advanced institutions	41	...	...	...
303	Total for graduates	1,216	...	...	...
<i>Undergraduate Students</i>					
190	Universities and colleges	613	86.76	86.83	2.72
13	Foreign advanced institutions	17	73.33	81.25	2.67
18	Normal schools and teachers colleges	24	84.00	80.95	2.59
60	Junior colleges	240	84.05	76.79	2.53
	High schools:				
111	Private	217	84.32	82.03	2.48
400	Public	905	82.99	82.61	2.59
	Special students	6	...	83.33	2.44
	Unclassified .....	...	...	...	....
792	Total for undergraduates	2,022	84.35	83.10	2.61

TABLE VII
GRADUATE STUDENTS

FROM COLLEGES, UNIVERSITIES, STATE TEACHERS COLLEGES, AND NORMAL
SCHOOLS IN THE UNITED STATES AND POSSESSIONS

	No. of Students 1944-47		No. of Students 1944-47
<i>Alabama</i>		<i>Southern California, University</i>	
Alabama Polytechnic Institute...	3	of	52
Alabama, University of	6	Whittier College	7
<i>Arizona</i>		<i>Colorado</i>	
Arizona State College, Flagstaff	5	Colorado College	3
Arizona State College, Tempe...	10	Colorado School of Mines.....	3
Arizona, University of.....	16	Colorado State College of Agricul- ture and Mechanic Arts	4
<i>Arkansas</i>		Colorado State College of Educa- tion	14
Arkansas Agricultural and Me- chanical College	1	Colorado, University of.....	23
Arkansas, University of.....	1	Denver, University of.....	14
<i>California</i>		Western State College of Colo- rado	1
California College of Arts and Crafts	1	<i>Connecticut</i>	
California Institute of Technol- ogy	50	Connecticut College	1
California, University of, Berke- ley	276	Connecticut, University of.....	1
California, University of, College of Agriculture	8	St. Joseph College.....	1
California, University of, Los Angeles	61	Teachers College of Connecticut..	1
California, University of, Santa Barbara	19	Wesleyan University	2
Chapman College	2	Yale University	28
Chico State College.....	16	<i>District of Columbia</i>	
Claremont Colleges	6	American University	1
Dominican College	2	Catholic University of America..	2
Fresno State College.....	35	Gallaudet College	1
George Pepperdine College.....	2	Georgetown University	2
Holy Names, College of the....	1	George Washington University..	3
Humboldt State College.....	8	Trinity College	1
Immaculate Heart College.....	1	Wilson Teachers College.....	2
Loyola University	4	<i>Florida</i>	
Mills College	11	Florida Southern College	2
Occidental College	12	Florida State College for Women	1
Pacific, College of the.....	27	Florida, University of.....	5
Pacific Union College.....	7	Miami, University of.....	1
Pasadena College	2	Rollins College	1
Pomona College	38	<i>Georgia</i>	
Redlands, University of.....	9	Agnes Scott College.....	1
St. Joseph's College.....	1	Atlanta University	1
St. Mary's College.....	4	Berry College	1
San Diego State College.....	17	Emory University	1
San Francisco College for Women	5	Georgia School of Technology....	5
San Francisco State College....	85	Georgia State College for Women	1
San Francisco, University of....	17	Georgia, University of.....	1
San Jose State College.....	203	<i>Hawaii, Territory of</i>	
Santa Clara, University of.....	20	Hawaii, University of.....	1
Scripps College	2	<i>Idaho</i>	
		Idaho, College of.....	2
		Idaho, University of.....	18

TABLE VII (Continued)

	No. of Students 1944-47	No. of Students 1944-47	
<i>Illinois</i>			
Augustana College	2	Fort Hays Kansas State College.. 2	
Barat College (of the Sacred Heart)	1	Friends University	1
Chicago Teachers College.....	1	Kansas State College of Agriculture and Applied Science.....	7
Chicago, University of.....	22	Kansas State Teachers College, Emporia	2
DePaul University	1	Kansas State Teachers College, Pittsburg	2
Eastern Illinois State Teachers College	2	Kansas, University of.....	12
Eureka College	1	Ottawa University	2
George Williams College.....	3	St. Benedict's College.....	1
Illinois Institute of Technology..	4	Washburn Municipal University	1
Illinois State Normal University	1	Wichita, University of.....	5
Illinois, University of.....	15	<i>Kentucky</i>	
Illinois Wesleyan University....	1	Asbury College	1
Lake Forest College.....	2	Kentucky, University of.....	3
Loyola University	1	Louisville, University of.....	1
North Central College.....	1	Western Kentucky State Teachers College	1
Northern Illinois State Teachers College	4	<i>Louisiana</i>	
Northwestern University	23	Louisiana Polytechnic Institute..	1
Southern Illinois State Normal University	1	Louisiana State University.....	10
The Principia	3	Southwestern Louisiana Institute	1
Western Illinois State Teachers College	1	Tulane University	6
<i>Indiana</i>		<i>Maine</i>	
Ball State Teachers College.....	1	Bates College	1
DePauw University	4	Bowdoin College	1
Earlham College	1	Maine, University of.....	3
Evansville College	2	<i>Maryland</i>	
Indiana State Teachers College..	1	Goucher College	1
Indiana University	9	Johns Hopkins University.....	4
Manchester College	2	Maryland, University of.....	3
Notre Dame, University of.....	6	United States Naval Academy...	11
Purdue University	15	<i>Massachusetts</i>	
St. Joseph's College.....	1	Amherst College	1
Valparaiso University	1	Boston University	9
Wabash College	1	Clark University	2
<i>Iowa</i>		Harvard University	33
Coe College	1	Holy Cross, College of.....	2
Cornell College	2	International Y.M.C.A. College..	2
Drake University	3	Massachusetts Institute of Technology	17
Grinnell College	2	Mt. Holyoke College.....	2
Iowa State College of Agriculture and Mechanic Arts.....	11	Radcliffe College	2
Iowa State Teachers College....	4	Simmons College	3
Iowa, State University of.....	22	Smith College	2
Kletzing College	1	State Teachers College.....	1
Persons College	1	Tufts College	1
St. Ambrose College.....	1	Wellesley College	6
Simpson College	2	Wheaton College	1
<i>Kansas</i>		Williams College	1
Bethany College	1	Worcester Polytechnic Institute..	1
Bethel College	1	<i>Michigan</i>	
		Albion College	1
		Alma College	2

TABLE VII (Continued)

	No. of Students 1944-47		No. of Students 1944-47
Detroit Institute of Technology..	3	Nebraska State Teachers College	
Detroit, University of.....	1	at Kearney	1
Kalamazoo College	1	Nebraska, University of.....	18
Michigan College of Mining and		Peru State Teachers College.....	3
Technology	1	<i>Nevada</i>	
Michigan State College.....	6	Nevada, University of.....	15
Michigan State Normal College..	2	<i>New Hampshire</i>	
Michigan, University of.....	25	Dartmouth College	11
Wayne University	4	St. Anselm's College.....	1
Western Michigan College of		<i>New Jersey</i>	
Education	1	Drew University	2
<i>Minnesota</i>		New Jersey College for Women..	1
Augsburg College	1	New Jersey State Teachers Col-	
Carleton College	4	lege	1
Hamline University	1	Princeton University	9
Macalester College	2	Rutgers University	4
Minnesota, University of.....	20	<i>New Mexico</i>	
St. Catherine, College of.....	2	New Mexico College of Agricul-	
St. Olaf College.....	2	ture and Mechanic Arts.....	1
St. Teresa, College of.....	1	New Mexico State Teachers Col-	
St. Thomas, College of.....	1	lege	1
State Teachers College, Mankato	1	New Mexico, University of.....	12
<i>Mississippi</i>		<i>New York</i>	
Millsaps College	2	Brooklyn College	4
Mississippi State College.....	1	Buffalo, University of.....	2
Mississippi State College for		City of New York, College of the	4
Women	2	Colgate University	4
Mississippi, University of.....	2	Columbia University	41
<i>Missouri</i>		Cooper Union	1
Central College	2	Cornell University	13
Central Missouri State Teachers		Hamilton College	1
College	2	Hunter College	4
Concordia Theological Seminary..	1	Ithaca College	1
Drury College	1	New Rochelle, College of.....	1
Harris Teachers College.....	1	New York State College for	
Kansas City, University of.....	3	Teachers	5
Lindenwood College	1	New York University.....	11
Missouri, University of.....	17	Niagara University	1
Park College	2	Polytechnic Institute of Brooklyn	
St. Louis University.....	2	Pratt Institute	1
Southwest Missouri State Teach-		Queens College	3
ers College	3	Rensselaer Polytechnic Institute	
Tarkio College	1	Rochester, University of.....	1
Washington University	8	St. Lawrence University.....	2
Westminster College	1	State Teachers College, Buffalo..	3
<i>Montana</i>		State Teachers College, Cortland	2
Billings Polytechnic	3	State Teachers College, Geneseo..	2
Carroll College	1	State Teachers College, Oswego..	1
Montana State College.....	4	Syracuse University	6
Montana State Normal College...	1	Union College	2
Montana, University of.....	8	United States Military Academy	18
<i>Nebraska</i>		Vassar College	7
Creighton University	2	Wells College	1
Municipal University of Omaha..	3		

TABLE VII (Continued)

	No. of Students 1944-47		No. of Students 1944-47
<i>North Carolina</i>			
Duke University	5	Lafayette College	2
North Carolina, University of...	10	Lehigh University	3
<i>North Dakota</i>			
North Dakota, University of....	3	Mansfield State Teachers Col- lege	1
<i>Ohio</i>			
Antioch College	4	Pennsylvania College for Women	1
Bowling Green State University	3	Pennsylvania State College.....	4
Case School of Applied Science..	3	Pennsylvania State Teachers Col- lege	1
Cincinnati, University of.....	5	Pennsylvania, University of.....	9
Fenn College	1	Pittsburgh, University of.....	2
Hiram College	2	Seton Hill College.....	1
Kent State University.....	2	Shippensburg State Teachers Col- lege	1
Kenyon College	4	Stroudsburg State Teachers Col- lege	1
Miami University	5	Swarthmore College	9
Mount Union College.....	1	Temple University	1
Muskingum College	2	Villanova College	1
Oberlin College	4	Washington and Jefferson College	1
Ohio Northern University.....	1	Waynesburg College	1
Ohio State University.....	16	West Chester State Teachers Col- lege	1
Ohio University	4	Westminster College	1
Ohio Wesleyan University.....	3	<i>Puerto Rico</i>	
Otterbein College	2	Puerto Rico, University of.....	1
Toledo, University of.....	2	<i>Rhode Island</i>	
Western College	2	Brown University	4
Western Reserve University.....	5	Rhode Island State College.....	1
Wooster, The College of.....	3	<i>South Carolina</i>	
Youngstown College	1	Furman University	1
<i>Oklahoma</i>			
Northwestern State College.....	1	Presbyterian College	1
Oklahoma Agricultural and Me- chanical College	8	South Carolina, University of...	1
Oklahoma College for Women....	1	Winthrop College	1
Oklahoma, University of.....	15	<i>South Dakota</i>	
Tulsa, University of.....	2	Augustana College	1
<i>Oregon</i>			
Linfield College	2	Dakota Wesleyan University....	1
Oregon College of Education....	1	Northern State Teachers College	1
Oregon State College.....	20	South Dakota, University of....	5
Oregon, University of.....	30	Yankton College	1
Portland, University of.....	3	<i>Tennessee</i>	
Reed College	9	George Peabody College for Teachers	3
Willamette University	7	Memphis State College.....	1
<i>Pennsylvania</i>			
Albright College	1	South, University of the.....	1
Beaver College	1	Tennessee Polytechnic Institute..	3
Bryn Mawr College.....	1	Tennessee, University of.....	3
Bucknell University	1	Union University	1
Carnegie Institute of Technology	3	Vanderbilt University	2
Drexel Institute of Technology...	1	<i>Texas</i>	
Edinboro State Teachers College	2	Agricultural and Mechanical Col- lege	6
Gettysburg College	1	Baylor University	1
Grove City College.....	1	Hardin-Simmons University	4
Immaculate College	1	Houston, University of.....	1

TABLE VII (Continued)

	No. of Students 1944-47		No. of Students 1944-47
Incarnate Word College.....	1	<i>Washington</i>	
North Texas State Teachers Col- lege	3	Central Washington College of Education	7
Southern Methodist University...	3	Eastern Washington College of Education	6
Southwestern University	1	Gonzaga University	6
Texas Christian University.....	1	Pacific Lutheran College.....	2
Texas Technological College.....	4	Puget Sound, College of.....	4
Texas, University of.....	18	St. Martin's College.....	1
West Texas State Teachers Col- lege	2	Walla Walla College.....	2
<i>Utah</i>		Washington State College.....	16
Brigham Young University.....	30	Washington, University of.....	76
Utah State Agricultural College..	20	Western Washington College of Education	7
Utah, University of.....	61	Whitman College	6
<i>Vermont</i>		Whitworth College	2
Goddard College	1		
Middlebury College	2	<i>West Virginia</i>	
Norwich University	1	Marshall College	1
<i>Virginia</i>		West Virginia University.....	5
Emory and Henry College.....	1	West Virginia Wesleyan College	3
Hampton Institute	1		
Hollins College	1	<i>Wisconsin</i>	
Mary Washington College.....	3	Carroll College	3
Medical College of Virginia....	1	Lawrence College	2
Randolph Macon Woman's Col- lege	1	Marquette University	3
Richmond, University of.....	1	Ripon College	1
State Teachers College.....	1	State Teachers College, Eau Claire	1
Sweet Briar College.....	1	State Teachers College, LaCrosse	2
Virginia Military Institute.....	3	State Teachers College, Milwaukee	3
Virginia Polytechnic Institute...	2	Wisconsin, University of.....	22
Virginia, University of.....	4		
Washington and Lee University..	4	<i>Wyoming</i>	
		Wyoming, University of	6

FROM FOREIGN ADVANCED INSTITUTIONS

	No. of Students 1944-47		No. of Students 1944-47
<i>Austria</i>		<i>China</i>	
Vienna, University of.....	1	Aurora University	1
<i>Brasil</i>		Chiao Tung University.....	3
São Paulo, Universidade de	1	Fuh Tan University.....	2
<i>Canada</i>		Great China University.....	1
Acadia University	1	Hua Chung College.....	1
Alberta, University of.....	16	Kiangsu Provincial College of Education	1
British Columbia, University of..	3	National Central University....	7
McGill University	1	National Northwestern College of Engineering	1
Manitoba, University of	1	National Southwest Associated University	3
Saskatchewan, University of.....	1	National Szechwan University...	1
Toronto, University of.....	3		
<i>Chile</i>			
Chile, University of.....	1		

TABLE VII (*Concluded*)

	No. of Students 1944-47		No. of Students 1944-47
National Tangshan Engineering College	1	Presidency College	1
National Tsing-Hua University..	1	Punjab, University of.....	2
National University of Chekiang	1	Travancore, University of.....	1
National Wu-Han University....	2	University College of Science and Technology	1
St. Johns University.....	2	<i>Iran</i>	
Teachers College	1	Superior Technical Faculty of Iran	1
Yenching University	1	<i>Manchukuo</i>	
<i>Egypt</i>		Harbin, University of.....	1
Fouad Ist University.....	1	<i>Nicaragua</i>	
<i>Germany</i>		Central University of Nicaragua	1
Berlin, University of.....	1	<i>Peru</i>	
Technische Hochschule	1	Catholic University	1
<i>Greece</i>		National School of Engineering..	1
Greek Naval Academy.....	1	<i>Philippine Islands</i>	
<i>Haiti</i>		Mapua Institute of Technology..	1
École Nationale D'Agriculture ..	1	Philippines, University of the....	1
<i>Iceland</i>		Silliman University	1
Iceland, University of.....	2	<i>Syria</i>	
<i>India</i>		American University of Beirut..	1
Allahabad, University of.....	1	<i>Turkey</i>	
Benares Hindu University.....	3	Istanbul American College.....	1
Calcutta University	1	<i>Venezuela</i>	
College of Science and Technology	1	Central University of Venezuela..	5
Madras, University of.....	8		
Muslim University	1		

TABLE VIII

UNDERGRADUATE STUDENTS
FROM UNIVERSITIES AND COLLEGES IN THE UNITED STATES
AND POSSESSIONS

	No. of Students 1944-47	Grade- Point Rating
<i>Alabama</i>		
Alabama Polytechnic Institute	2	2.22
Alabama, University of	2	3.37
Howard College	1	2.68
<i>Alaska</i>		
Alaska, University of	1	2.15
<i>Arizona</i>		
Arizona State College, Flagstaff.....	10	2.44
Arizona State College, Tempe.....	1	2.37
Arizona, University of.....	9	2.96
<i>Arkansas</i>		
Arkansas Agricultural and Mechanical College.....	1	2.76
Arkansas, University of.....	4	2.76
Hendrix College	1	2.73
<i>California</i>		
California Institute of Technology.....	20	2.69
California, University of	110	2.83

TABLE VIII (*Continued*)

	No. of Students 1944-47	Grade- Point Rating
California, University of, College of Agriculture.....	1	2.36
California, University of, at Los Angeles.....	86	2.71
California, University of, Santa Barbara College.....	6	2.82
Chico State College.....	11	2.79
Dominican College.....	7	3.08
Fresno State College.....	22	2.70
Humboldt State College.....	5	3.24
Immaculate Heart College.....	1	3.28
Loyola University.....	8	3.21
Mills College.....	7	2.76
Mount St. Mary's College.....	1	2.37
Occidental College.....	29	2.72
Pacific, College of the.....	17	2.57
Pacific Union College.....	1	2.70
Physicians and Surgeons, College of.....	1	3.31
Pomona College.....	14	3.14
Redlands, University of.....	17	2.68
St. Joseph's College.....	2	2.05
St. Mary's College.....	1	2.17
San Diego State College.....	15	2.72
San Francisco State College.....	19	2.45
San Francisco, University of.....	7	2.52
San Jose State College.....	130	2.51
Santa Clara, University of.....	1	2.35
Scripps College.....	9	2.90
Southern California, University of.....	31	2.54
Whittier College.....	3	1.99
<i>Colorado</i>		
Colorado Agricultural and Mechanical College.....	1	3.13
Colorado College.....	8	2.59
Colorado School of Mines.....	1	2.36
Colorado, University of.....	12	3.16
Denver, University of.....	8	2.83
<i>Connecticut</i>		
Connecticut College.....	3	2.91
Connecticut, University of.....	3	2.63
Yale University.....	7	2.81
<i>District of Columbia</i>		
Catholic University of America.....	1	2.33
Georgetown University.....	1	2.62
George Washington University.....	4	3.07
National University.....	1	2.77
Trinity College.....	1	3.47
<i>Florida</i>		
Florida Southern College.....	1	2.77
Florida, University of.....	2	2.57
Miami, University of.....	1	2.94
Rollins College.....	3	2.98
<i>Georgia</i>		
Emory University.....	2	3.02
Georgia School of Technology.....	3	3.31
<i>Hawaii, Territory of</i>		
Hawaii, University of.....	3	2.90

TABLE VIII (*Continued*)

	No. of Students 1944-47	Grade- Point Rating
<i>Idaho</i>		
Idaho, University of.....	12	2.39
<i>Illinois</i>		
Central Y.M.C.A. College.....	2	3.13
Chicago, University of.....	14	3.13
DePaul University	2	3.15
Illinois College	1	3.00
Illinois, University of.....	6	3.10
Knox College	2	3.14
Lake Forest College.....	1	2.30
MacMurray College	2	2.33
North Central College.....	1	2.58
Northwestern University	11	2.82
The Principia	3	2.83
Wheaton College	2	2.38
<i>Indiana</i>		
Butler University	1	3.47
DePauw University	2	3.41
Earlham College	2	2.27
Indiana University	7	2.74
Notre Dame, University of.....	4	2.65
Purdue University	8	3.17
Tri-State College	1	2.22
<i>Iowa</i>		
Buena Vista College.....	1	2.51
Central College	1	1.33
Clarke College	1	2.00
Cornell College	1	1.62
Drake University	1	2.69
Dubuque, University of.....	2	2.32
Grinnell College	1	2.33
Iowa State College of Agriculture and Mechanic Arts.....	5	2.34
Iowa, State University of.....	7	2.87
Tabor College	1	2.07
Upper Iowa University.....	1	2.93
<i>Kansas</i>		
Fort Hays State College.....	2	2.34
Kansas State College of Agriculture and Applied Science.....	2	2.73
Kansas, University of.....	8	2.38
Washburn Municipal University.....	2	1.75
Wichita, University of.....	3	2.44
<i>Kentucky</i>		
Asbury College	1	2.98
Berea College	2	2.85
Kentucky, University of.....	2	2.56
Louisville, University of	3	2.46
<i>Louisiana</i>		
Centenary College	1	1.88
Louisiana Polytechnic Institute.....	3	2.58
Louisiana State University.....	5	3.00
Southwestern Louisiana Institute.....	6	2.55
Tulane University	4	2.70

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
<i>Maryland</i>		
Goucher College	2	3.75
Johns Hopkins University.....	1	3.12
St. John's College.....	1	3.29
United States Naval Academy.....	2	2.30
Washington Missionary College.....	1	2.50
<i>Massachusetts</i>		
Boston University	1	1.67
Eastern Nazarene College.....	1	2.67
Harvard University	3	3.05
International Y.M.C.A. College.....	1	2.07
Massachusetts Institute of Technology.....	4	3.41
Massachusetts State College.....	1	2.76
Mt. Holyoke College.....	2	2.88
Northeastern University	1	3.06
Radcliffe College	4	2.84
Smith College	11	3.20
Tufts College	1	3.40
Wellesley College	5	3.23
Williams College	1	3.10
<i>Michigan</i>		
Albion College	1	3.33
Alma College	1	2.22
Michigan State College.....	5	2.86
Michigan, University of.....	13	2.65
Wayne University	4	2.62
<i>Minnesota</i>		
Carleton College	5	3.03
Macalester College	2	2.32
Minnesota, University of.....	10	2.74
St. Catherine, College of.....	1	2.11
St. John's University	1	Leave
St. Thomas, College of.....	4	2.83
<i>Mississippi</i>		
Mississippi, University of.....	1	3.20
<i>Missouri</i>		
Central College	1	2.36
Concordia Seminary	1	Leave
Kansas City, University of.....	2	1.25
Lindenwood College	3	2.66
Missouri, University of.....	4	3.01
Missouri Valley College.....	2	1.90
Park College	2	2.29
St. Louis University.....	1	2.07
Westminster College	2	2.89
William Jewell College.....	1	3.14
<i>Montana</i>		
Carroll College	4	2.74
Montana School of Mines.....	2	2.39
Montana State College.....	5	2.54
Montana State University.....	10	2.64
Northern Montana College.....	1	2.37
<i>Nebraska</i>		
Creighton University	2	2.23
Doane College	1	2.08

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Nebraska, University of	8	2.69
Nebraska Wesleyan University.....	1	2.70
Omaha, University of.....	2	2.18
<i>Nevada</i>		
Nevada, University of.....	8	2.34
<i>New Hampshire</i>		
Dartmouth College	2	2.87
<i>New Jersey</i>		
Princeton University	1	2.42
South Jersey, College of.....	1	3.16
Stevens Institute of Technology.....	1	1.80
<i>New Mexico</i>		
New Mexico College of Agriculture and Mechanic Arts.....	2	2.70
New Mexico School of Mines.....	1	2.94
New Mexico, University of.....	9	2.80
<i>New York</i>		
Brooklyn College	3	2.97
City of New York, College of the.....	4	2.69
Columbia University	6	2.70
Cornell University	5	2.62
Fordham University	1	3.17
Hamilton College	2	2.81
Hobart College	1	2.58
Houghton College	1	2.94
Hunter College	1	2.69
Keuka College	1	1.44
Montfort Apostolic Seminary.....	1	1.12
New York University.....	7	2.72
Niagara University	1	3.45
Polytechnic Institute	1	3.75
Queens College	1	3.46
Sarah Lawrence College.....	1	2.00
Syracuse University	2	3.26
Union College	4	2.35
United States Military Academy.....	1	2.27
Vassar College	3	3.39
Wagner Memorial Lutheran College.....	1	1.89
Wells College	1	2.93
<i>North Carolina</i>		
Davidson College	1	3.10
Duke University	3	2.69
North Carolina, University of.....	2	2.06
<i>North Dakota</i>		
North Dakota, University of.....	3	2.37
State Agricultural College.....	2	2.46
<i>Ohio</i>		
Akron, University of.....	2	3.07
Antioch College	2	2.54
Baldwin-Wallace College	2	2.69
Bowling Green State University.....	3	2.91
Cincinnati, University of.....	4	3.11
Denison University	2	3.16
Fenn College	1	3.26

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Heidelberg College	1	2.70
Kent State University	2	2.24
Marietta College	1	3.00
Miami University	3	2.78
Oberlin College	3	3.30
Ohio State University	9	2.47
Ohio University	2	3.07
Toledo, University of	1	2.32
Western College	1	2.98
Western Reserve University	2	1.74
Wittenberg College	1	2.61
Xavier University	1	2.86
<i>Oklahoma</i>		
Oklahoma Agricultural and Mechanical College	4	2.56
Oklahoma City University	1	1.83
Oklahoma, University of	8	2.93
Tulsa, University of	4	2.53
<i>Oregon</i>		
Lewis and Clark College	2	2.70
Marylhurst College	1	2.07
Oregon State College	23	2.79
Oregon, University of	25	2.70
Pacific University	1	2.24
Portland, University of	3	1.91
Reed College	8	2.89
Willamette University	4	2.45
<i>Pennsylvania</i>		
Allegheny College	1	2.16
Carnegie Institute of Technology	1	2.77
Drexel Institute of Technology	3	3.18
Geneva College	1	2.71
Haverford College	1	.88
Lehigh University	3	2.57
Moravian College for Women	1	0.00
Pennsylvania College for Women	1	1.92
Pennsylvania State College	3	2.58
Pennsylvania, University of	11	2.81
Pittsburgh, University of	2	2.61
Susquehanna University	1	2.21
Swarthmore College	3	3.57
Villanova College	1	2.88
Washington and Jefferson College	1	2.79
Waynesburg College	1	3.05
<i>Puerto Rico</i>		
Agriculture and Mechanical Arts, College of	1	3.67
<i>Rhode Island</i>		
Brown University	2	2.38
Rhode Island State College	1	2.83
<i>South Carolina</i>		
Clemson College	1	3.00
The Citadel	3	2.40
<i>Tennessee</i>		
Maryville College	1	2.85
South, University of the	1	2.33

TABLE VIII (*Continued*)

	No. of Students 1944-47	Grade- Point Rating
Southwestern College	1	3.04
Tennessee, University of	2	2.18
Vanderbilt University	1	2.08
<i>Texas</i>		
Agricultural and Mechanical College of Texas	14	2.58
Austin College	1	2.60
Baylor University	4	2.89
Hardin-Simmons University	1	2.63
Rice Institute	3	2.57
Southern Methodist University	8	2.73
Southwestern University	4	2.24
Texas Christian University	6	2.18
Texas Technological College	4	2.62
Texas, University of	16	2.55
Trinity University	1	2.94
<i>Utah</i>		
Brigham Young University	9	2.88
Utah State Agricultural College	5	2.50
Utah, University of	34	2.53
<i>Vermont</i>		
Norwich University	1	3.24
<i>Virginia</i>		
Emory and Henry College	1	2.33
Sweet Briar College	2	3.56
Virginia Military Institute	5	2.32
Virginia Polytechnic Institute	2	2.63
Washington and Lee University	1	1.66
William and Mary, College of	1	3.20
<i>Washington</i>		
Gonzaga University	5	2.52
Puget Sound, College of	3	2.75
Washington State College	7	2.92
Washington, University of	58	2.66
Whitman College	12	2.63
<i>West Virginia</i>		
Davis and Elkins College	1	1.39
Marshall College	2	2.95
West Virginia University	2	2.76
<i>Wisconsin</i>		
Lawrence College	1	Leave
Marquette University	1	3.11
Milwaukee-Downer College	1	2.00
Ripon College	3	2.60
Wisconsin, University of	13	2.84
<i>Wyoming</i>		
Wyoming, University of	8	2.86

FROM FOREIGN ADVANCED INSTITUTIONS

	No. of Students 1944-47	Grade- Point Rating
<i>Afghanistan</i>		
Afghanistan, University of	1	1.48

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
<i>Argentina</i>		
Buenos Aires, Universidad de.....	2	2.93
<i>Australia</i>		
Scotch College	1	2.74
<i>Belgium</i>		
Brussels, University of.....	1	2.89
<i>Brazil</i>		
São Paulo, Universidade de.....	1	3.55
<i>Canada</i>		
British Columbia, University of.....	2	2.40
Manitoba, University of.....	2	3.12
Toronto, University of.....	1	2.93
Victoria College	1	1.65
<i>China</i>		
Hong Kong, University of.....	1	3.06
National Southwest Association University.....	1	1.00
St. John's University.....	2	2.25
<i>Costa Rica</i>		
Colegio Seminario	1	Leave
<i>Czechoslovakia</i>		
Charles University	1	2.79
<i>Ecuador</i>		
Guayaquil, University of.....	1	1.88
<i>El Salvador</i>		
New College of Commerce and Finance.....	1	1.00
<i>England</i>		
London, University of.....	1	3.28
<i>India</i>		
Foreman Christian College.....	1	3.14
<i>Mexico</i>		
Mexico City College.....	1	3.14
Universidad de Guanajuato.....	2	2.41
<i>Norway</i>		
Frogner College	1	2.04
Oslo University	2	2.48
<i>Peru</i>		
Universidad Nacional Mayor de San Marcos de Lima.....	1	.56
<i>Philippine Islands</i>		
De La Salle College.....	1	2.50
Philippines, University of the.....	2	3.25
<i>Russia</i>		
Imperial St. Petersburg Conservatory of Music.....	1	3.38
<i>Sweden</i>		
Kristianstad Gymnasium	1	2.34
Tekniska Institutet	1	1.86
<i>Turkey</i>		
Veterinary College of Institute of Agriculture.....	1	1.36

FROM STATE TEACHERS COLLEGES AND NORMAL SCHOOLS

	No. of Students 1944-47	Grade- Point Rating
<i>Colorado</i>		
Colorado State College of Education.....	3	2.85

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
<i>District of Columbia</i>		
Wilson Teachers College.....	1	3.71
<i>Idaho</i>		
North Idaho State Teachers College.....	3	2.70
<i>Illinois</i>		
Illinois State Normal University.....	3	2.92
Southern Illinois Normal University.....	1	3.00
<i>Indiana</i>		
Ball State Teachers College.....	1	3.65
<i>Iowa</i>		
Iowa State Teachers College.....	2	2.81
<i>Kansas</i>		
Kansas State Teachers College, Emporia.....	2	2.11
Kansas State Teachers College, Pittsburg.....	1	2.00
<i>Kentucky</i>		
Eastern Kentucky State Teachers College.....	1	2.89
<i>Maine</i>		
Gorham State Teachers College.....	1	2.92
<i>Massachusetts</i>		
State Teachers College.....	1	1.93
<i>Michigan</i>		
Northern Michigan College of Education.....	1	2.85
Western Michigan College of Education.....	1	2.04
<i>Minnesota</i>		
Mankato State Teachers College.....	1	3.88
<i>Missouri</i>		
Central Missouri State Teachers College.....	1	1.54
Northwest Missouri State Teachers College.....	2	2.89
Southeast Missouri State Teachers College.....	1	2.13
<i>Nebraska</i>		
Nebraska State Teachers College, Chadron.....	1	Leave
Nebraska State Teachers College, Kearney.....	1	2.58
<i>New Jersey</i>		
New Jersey State Teachers College, Montclair.....	1	2.68
New Jersey State Teachers College, Newark.....	1	3.45
<i>New York</i>		
New York State College for Teachers.....	1	3.35
<i>North Dakota</i>		
State Teachers College, Dickinson.....	2	2.55
State Teachers College, Valley City.....	7	2.25
<i>Oregon</i>		
Oregon State College of Education.....	2	2.49
Southern Oregon College of Education.....	1	Leave
<i>Pennsylvania</i>		
State Teachers College, California.....	2	2.07
<i>South Dakota</i>		
Eastern State Normal School.....	1	2.44
Northern State Teachers College.....	1	3.00
<i>Texas</i>		
East Texas State Teachers College.....	1	1.26
North Texas State Teachers College.....	2	2.95

TABLE VIII (*Continued*)

	No. of Students 1944-47	Grade- Point Rating
<i>Washington</i>		
Central Washington College of Education.....	1	3.04
Eastern Washington College of Education.....	3	1.82
Western Washington College of Education.....	5	3.05
<i>Wisconsin</i>		
State Teachers College, Superior.....	1	2.52

FROM JUNIOR COLLEGES

	No. of Students 1944-47	Grade- Point Rating
<i>Arizona</i>		
Phoenix Junior College.....	8	2.45
<i>Arkansas</i>		
Arkansas Polytechnic College.....	1	1.45
<i>California</i>		
Armstrong Junior College.....	1	2.64
Bakersfield Junior College.....	11	2.62
Brawley Junior College.....	1	2.66
Central Junior College.....	1	2.46
Chaffey Junior College.....	8	2.72
Citrus Junior College.....	2	2.39
Compton Junior College.....	3	2.91
Deep Springs Preparatory and Collegiate School.....	1	1.97
East Los Angeles Junior College.....	1	2.47
Fullerton Junior College.....	8	2.52
Glendale Junior College.....	5	2.72
Grant Technical College.....	2	1.57
Holmby College.....	1	2.27
John Muir Junior College.....	3	2.03
La Sierra College.....	2	2.23
Lassen Junior College.....	1	1.57
Long Beach City College.....	13	2.72
Los Angeles City College.....	14	2.65
Marin Junior College.....	13	2.56
Menlo Junior College.....	36	2.20
Modesto Junior College.....	19	2.74
Mount San Antonio College.....	1	2.57
Notre Dame, College of.....	6	1.94
Pasadena Junior College.....	70	2.76
Placer Junior College.....	3	1.83
Porterville Junior College.....	2	2.17
Reedley Junior College.....	2	1.84
Riverside Junior College.....	5	2.13
Sacramento College.....	34	2.47
Salinas Junior College.....	6	1.73
San Bernardino Valley Junior College.....	1	2.71
San Francisco Junior College.....	29	2.46
San Jose State College.....	6	2.69
San Luis Obispo Junior College.....	2	2.50
San Mateo Junior College.....	52	2.56
Santa Ana Junior College.....	8	2.54
Santa Maria Junior College.....	1	....
Santa Monica Junior College.....	3	2.14
Santa Rosa Junior College.....	13	2.58

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Stockton Junior College.....	23	2.46
Taft Junior College.....	5	2.31
Ventura Junior College.....	5	2.78
Visalia Junior College.....	4	2.90
Yuba County Junior College.....	3	2.46
<i>Colorado</i>		
Colorado Woman's College.....	2	1.70
Trinidad State Junior College.....	2	2.09
<i>District of Columbia</i>		
Holton Arms Junior College.....	1	3.58
<i>Florida</i>		
Palm Beach Junior College.....	1	2.72
<i>Idaho</i>		
Boise Junior College.....	5	2.64
Idaho State College.....	11	2.52
<i>Illinois</i>		
Monticello College	4	2.72
North Park College.....	1	3.66
Thornton Township Junior College	1	2.08
Wilbur Wright Junior College.....	3	2.97
<i>Indiana</i>		
Vincennes University	1	Leave
<i>Iowa</i>		
Burlington Junior College.....	1	3.34
Ft. Dodge Junior College.....	1	0.00
<i>Kansas</i>		
Dodge City Junior College.....	1	1.94
El Dorado Junior College.....	1	1.50
Kansas City, Kansas, Junior College.....	1	2.11
<i>Louisiana</i>		
Northeast Junior College.....	1	3.38
<i>Massachusetts</i>		
Lasell Junior College.....	1	2.00
Pine Manor Junior College.....	1	2.46
<i>Minnesota</i>		
Hibbing Junior College.....	1	3.33
<i>Missouri</i>		
Cottey College	4	3.15
Jefferson College	1	2.59
Kansas City, Junior College of.....	2	1.85
St. Joseph Junior College.....	1	3.11
Stephens College	22	2.84
Wentworth Military Academy.....	1	3.44
William Woods College.....	1	2.54
<i>Nebraska</i>		
Scottsbluff Junior College.....	1	1.75
<i>New Hampshire</i>		
Colby Junior College.....	1	3.54
<i>New Jersey</i>		
Bergen County, Junior College of.....	1	1.83
<i>New Mexico</i>		
New Mexico Military Institute Junior College.....	10	2.38

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
<i>New York</i>		
Bennett Junior College.....	2	1.88
Briarcliff Junior College.....	2	1.88
Edgewood Park Junior College.....	1	1.93
<i>North Dakota</i>		
Bismarck Junior College.....	1	1.92
<i>Oklahoma</i>		
Oklahoma Military Academy Junior College.....	1	.50
<i>Oregon</i>		
Multnomah College	1	2.43
<i>Pennsylvania</i>		
Ogontz Junior College.....	1	.28
<i>Tennessee</i>		
Ward-Belmont College	1	2.77
<i>Texas</i>		
Amarillo College	1	3.39
Corpus Christi Junior College	1	3.25
East Texas Baptist College.....	2	2.09
John Tarleton Agriculture College.....	1	1.68
Lamar College	2	1.84
North Texas Agricultural College.....	4	2.50
Schreiner Institute	1	2.00
<i>Utah</i>		
Weber College	8	2.15
<i>Vermont</i>		
Green Mountain Junior College.....	1	1.96
<i>Virginia</i>		
Southern Seminary and Junior College.....	1	1.96
<i>Washington</i>		
Everett Junior College.....	1	2.74
Grays Harbor Junior College.....	2	2.69
Lower Columbia Junior College.....	5	2.76
Spokane Junior College.....	1	1.49

FROM PREPARATORY SCHOOLS IN THE UNITED STATES AND POSSESSIONS

	No. of Students 1944-47	Grade- Point Rating
College Entrance Examination Board.....	47	2.30
Regents Examinations	2	1.86
Oxford and Cambridge School Examination Board.....	4	2.74

FROM PRIVATE SCHOOLS

	No. of Students 1944-47	Grade- Point Rating
<i>Alabama</i>		
Marion Institute	1	1.55
<i>Arizona</i>		
Phoenix: St. Mary's High School.....	3	1.80
Tucson: Potter School.....	1	3.12
St. Joseph's Academy.....	1	2.37

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
<i>Arkansas</i>		
Fort Smith: St. Anne's Academy.....	1	1.92
<i>California</i>		
Arcadia: Anoakia School.....	7	3.28
Azusa: Mabelle Scott Rancho School.....	3	2.23
Belmont: College of Notre Dame High School.....	6	2.46
Berkeley: Anna Head School.....	5	2.80
A-to-Zed School.....	6	1.88
Carpinteria: Vosberg-Cate School.....	3	2.36
Claremont: Girls Collegiate High School.....	1	3.25
Webb School.....	15	2.61
La Jolla: Bishop's School.....	4	2.82
Los Angeles: Black-Foxe Military Institute.....	4	2.36
Culter Academy.....	1	2.93
Immaculate Heart High School.....	5	2.60
Loyola High School.....	2	3.01
Marlborough School.....	19	2.53
Marymount School.....	1	2.79
St. Mary's Academy.....	1	2.35
Westlake School for Girls.....	7	2.50
Los Gatos: Montezuma Mountain School for Boys.....	4	1.63
Los Olivos: Midland School.....	5	2.11
Menlo Park: Convent of Sacred Heart High School.....	5	2.71
Menlo School.....	16	2.40
North Hollywood: Harvard School.....	6	2.19
Oakland: Academy of California Concordia College.....	3	2.54
Ojai: St. Thomas of Villanova Preparatory School.....	1	2.55
Thacher School.....	8	2.64
Oxnard: Santa Clara High School.....	1	2.87
Pacific Beach: Brown Military Academy.....	3	1.81
Palo Alto: Castilleja School.....	8	2.16
Interdale School for Boys.....	2	1.44
Miss Harker's School.....	2	2.00
Pasadena: Flintridge Preparatory School for Boys.....	5	2.35
Flintridge Sacred Heart High School.....	2	2.18
Mayfield School.....	1	3.78
Westridge School for Girls.....	6	2.51
Pebble Beach: Douglas School.....	2	2.19
Petaluma: St. Vincent's High School.....	1	3.18
Piedmont: Miss Wallace's School.....	1	2.77
Rolling Hills: Chadwick Seaside School.....	11	2.07
Ross: Katharine Branson School.....	5	3.12
Sacramento: Marion Webster School.....	1	.86
San Diego: St. Augustine School of San Diego.....	2	2.64
San Francisco: Bates School.....	3	1.49
California School of Mechanical Arts.....	1	1.88
Convent of Sacred Heart.....	2	1.73
Drew School.....	3	1.97
Katherine Delmar Burke.....	12	2.60
Lick-Wilmerding-Lux Schools.....	1	2.61
Notre Dame des Victoires High School.....	1	2.54
Notre Dame High School.....	1	2.17
St. Ignatius High School.....	8	2.41
St. Rose Academy High School.....	2	3.24
Sarah Dix Hamlin School.....	16	2.37
Wilkins Private High School.....	8	1.94

TABLE VIII (*Continued*)

	No. of Students 1944-47	Grade- Point Rating
San Jose: Bellarmine College Preparatory School.....	1	2.00
Notre Dame High School.....	1	2.49
San Marino Preparatory School.....	1	3.22
San Rafael: Dominican Convent High School.....	15	2.42
San Rafael Military Academy.....	4	1.74
Tamalpais School	3	2.02
Santa Barbara: Marymount School.....	1	3.31
Santa Monica: St. Monica's High School.....	3	2.45
Santa Rosa: Ursuline High School of Santa Rosa.....	2	2.01
Studio City: Corvallis School.....	1	2.29
<i>Colorado</i>		
Colorado Springs: Fountain Valley School.....	2	2.02
Denver: Randell School.....	2	1.77
Regis High School.....	2	2.62
<i>Connecticut</i>		
Greenwich: Edgewood School.....	1	1.19
Kent School	1	1.50
Lakeville: Hotchkiss School.....	1	2.47
Middlebury: Westover School.....	1	2.57
New London: Chapman Technical High School.....	1	3.57
Stamford: Daycroft School.....	1	1.93
Wallingford: Choate School.....	2	2.73
Watertown: Taft School.....	5	2.85
<i>District of Columbia</i>		
Georgetown Visitation Convent	1	2.48
<i>Georgia</i>		
Atlanta: Washington Seminary.....	1	2.87
<i>Territory of Hawaii</i>		
Honolulu: Punahou School.....	9	2.65
<i>Idaho</i>		
Boise: St. Teresa's Academy.....	1	3.05
<i>Illinois</i>		
Chicago Latin School.....	1	2.17
Francis W. Parker School.....	1	1.08
Harris School	1	2.37
North Park College Academy.....	1	2.00
St. Patrick High School.....	1	3.06
St. Philip High School.....	1	2.23
University of Chicago High School.....	1	1.18
Godfrey: Monticello College Preparatory School.....	1	3.31
Lake Forest: Ferry Hall.....	1	2.31
Mt. Carroll: Frances Shimer School.....	1	1.96
Winnetka: North Shore Country Day School.....	1	1.29
<i>Indiana</i>		
Culver Military Academy.....	25	2.15
Evansville: Reitz Memorial High School.....	1	2.08
<i>Iowa</i>		
Davenport: St. Ambrose Academy.....	1	1.71
<i>Kansas</i>		
St. Marys: Immaculate Conception High School.....	1	1.85
Wichita: Mount Carmel Academy.....	1	2.90
<i>Kentucky</i>		
Ashland: Holy Family School.....	1	3.13
Nazareth Academy	1	2.02

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
<i>Louisiana</i>		
New Orleans: Louise S. McGehee School.....	1	2.79
<i>Maryland</i>		
Catonsville: St. Timothy's School.....	1	2.78
Cumberland: La Salle Institute High School.....	1	1.84
Garrison Forest School.....	1	3.87
<i>Massachusetts</i>		
Andover: Phillips Academy.....	14	2.73
Boston: Brimmer and May School.....	1	2.63
Winsor School.....	2	2.61
Cambridge: Buckingham School.....	1	2.96
Concord Academy.....	1	2.59
Middlesex School.....	1	2.78
Dedham: Noble and Greenough School.....	1	1.88
Deerfield Academy.....	7	2.77
Easthampton: Williston Academy.....	1	2.00
Groton School.....	1	2.87
Lowell: Rogers Hall.....	1	2.53
Marion: Tabor Academy.....	1	2.21
Milton Academy.....	2	3.05
Wellesley: Dana Hall School.....	1	3.00
<i>Michigan</i>		
Bloomfield Hills: Cranbrook School.....	3	2.54
Kingswood School Cranbrook.....	1	2.80
Detroit: Liggett School.....	1	2.04
Glen Arbor: Leelanau for Boys.....	1	2.46
<i>Minnesota</i>		
Faribault: Shattuck School.....	3	1.51
Hopkins: Blake School.....	1	3.25
St. Paul: Summit School.....	2	2.64
<i>Mississippi</i>		
Gulfport: Gulf Park College High School.....	1	1.77
<i>Missouri</i>		
Clayton: John Burroughs School.....	2	1.79
Columbia: Stephens College, High School Department.....	2	2.12
Kansas City: Pembroke-Country Day School.....	2	2.01
Sunset Hill School.....	3	1.98
St. Louis: Mary Institute.....	1	2.89
Principia.....	1	3.23
<i>Nebraska</i>		
Greeley: Sacred Heart High School.....	1	1.41
Omaha: Brownell Hall.....	1	2.04
<i>New Hampshire</i>		
Concord: St. Paul's School.....	1	2.76
Exeter: Phillips Exeter Academy.....	6	2.68
Peterborough: Kendall Hall School.....	1	3.22
<i>New Jersey</i>		
Blairtown: Blair Academy.....	1	.55
Englewood: Dwight School.....	1	2.36
Lawrenceville School.....	4	2.20
Orange: Miss Beard's School.....	1	2.64
Summit: Oratory School.....	1	1.65
<i>New Mexico</i>		
Taos: Los Alamos Ranch School.....	1	1.27

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
<i>New York</i>		
Brooklyn Friends School	1	3.07
Buffalo Seminary	1	2.19
Park School of Buffalo	1	3.00
Manlius School	1	1.21
New York: Columbia Grammar School	1	2.07
Dalton School	1	2.84
Fieldston School	2	2.24
Horace Mann-Lincoln High School	2	2.82
Horace Mann School for Boys	3	3.00
Lenox School	1	3.09
Leonard School for Girls	1	1.26
Nightingale-Bamford School	1	2.91
Power Memorial Academy	1	2.11
Regis High School	1	2.71
Spence School	1	2.59
Trinity School	1	2.54
Walden School	1	2.71
Rochester: Harley School	1	2.20
<i>North Carolina</i>		
Asheville School	1	1.78
<i>Ohio</i>		
Celina: Immaculate Conception High School	1	2.67
Cincinnati: Hillsdale School	1	2.69
Ohio Military Institute	1	1.38
Cleveland: University School	1	1.95
Columbus School for Girls	2	3.06
<i>Oregon</i>		
Portland: Academy of the Holy Child	5	2.43
Catlin School	3	2.84
Central Catholic High School	1	2.69
Columbia Preparatory School	2	2.17
Gabel Country Day School	2	2.54
St. Mary's Academy	1	2.00
<i>Pennsylvania</i>		
Birmingham: Greier School	1	2.58
Bryn Mawr: Baldwin School	3	2.54
Chambersburg: Penn Hall Preparatory School	1	2.55
Fountain Springs: Immaculate Heart Academy	1	2.26
George School	1	2.93
Philadelphia: Brown Preparatory School	1	2.00
Episcopal Academy	1	2.44
Friends' Select School	1	2.31
Pottstown: Hill School	2	2.18
Saltsburg: Kiskiminetas Springs School	1	1.29
Westtown School	2	3.11
<i>Rhode Island</i>		
Middletown: St. George's School	1	2.32
Providence: Mary C. Wheeler School	2	2.92
<i>South Carolina</i>		
Charleston: Porter Military Academy	1	1.92
<i>Tennessee</i>		
Columbia Military Academy	1	2.72
Nashville: Ward-Belmont School	1	2.49

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
<i>Texas</i>		
Austin: Lutheran Concordia College High School.....	1	1.48
Bryan: Allan Academy	1	2.44
Dallas: Hockaday School	2	2.72
El Paso: Radford School for Girls.....	1	2.91
San Antonio: Our Lady of the Lake College.....	1	1.58
Peacock Military Academy	1	1.69
St. Mary's Hall	1	3.49
<i>Utah</i>		
Provo: Brigham Young University High School.....	1	3.59
Salt Lake City: Rowland Hall.....	1	1.73
<i>Vermont</i>		
Putney School	5	2.91
<i>Virginia</i>		
Alexandria: Episcopal High School.....	1	1.40
St. Agnes School	1	2.18
Bristol: Sullens College High School.....	1	2.70
Chatham Hall	3	3.18
Front Royal: Randolph Macon Academy.....	1	1.04
Greenway: Madeira School	2	2.13
Richmond: St. Catherine's School.....	1	3.57
<i>Washington</i>		
Seattle: Helen Bush School.....	7	2.17
Holy Names Academy	2	2.10
Lakeside School	3	2.27
St. Nicholas School	8	2.19
Spokane: Gonzaga High School	3	2.40
Holy Names Academy	1	.76
Tacoma: Annie Wright Seminary.....	3	2.54
<i>Wisconsin</i>		
Delafield: St. John's Military Academy.....	2	2.00
Kenosha: Kemper Hall	2	2.24
Lake Geneva: Northwestern Military and Naval Academy.....	2	1.97
Milwaukee Country Day School	1	3.34

FROM PUBLIC SCHOOLS

	No. of Students 1944-47	Grade- Point Rating
<i>Alabama</i>		
Birmingham: Phillips High School.....	1	3.00
Ramsay High School.....	1	2.18
Mobile: Murphy High School.....	1	2.63
<i>Alaska</i>		
Cordova High School	1	2.58
Fairbanks High School.....	1	2.42
Juneau High School.....	1	3.29
Ketchikan High School	1	2.46
<i>Arizona</i>		
Benson Union High School.....	1	3.13
Bisbee High School.....	1	1.67
Douglas High School.....	2	2.12
Glendale Union High School.....	1	2.07
Phoenix: North Phoenix High School	24	2.60

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Phoenix Union High School.....	6	2.99
Prescott High School.....	2	2.41
Thatcher High School.....	1	2.67
Tucson High School.....	10	2.47
Wickenburg High School.....	1	2.97
Winslow High School.....	1	2.26
Yuma Union High School.....	4	1.68
<i>Arkansas</i>		
Cushman High School.....	1	3.23
Little Rock High School.....	3	2.30
Rohwer Center High School.....	1	2.17
<i>California</i>		
Alameda High School.....	7	2.76
Albany High School.....	2	3.31
Alhambra City High School.....	8	2.54
Mark Keppel High School.....	3	2.98
Alturas: Modoc Union High School.....	1	1.97
Anaheim Union High School.....	3	2.19
Antioch High School.....	1	2.57
Arcata Union High School.....	1	2.62
Arroyo Grande Union High School.....	1	1.69
Atascadero Union High School.....	2	2.80
Auberry: Sierra Union High School.....	1	3.38
Azusa: Citrus Union High School.....	2	2.34
Bakersfield: Kern County Union High School.....	10	2.55
Banning Union High School.....	2	2.28
Bell High School.....	4	1.95
Berkeley High School.....	15	2.78
Beverly Hills High School.....	42	2.59
Bishop Union High School.....	1	2.77
Brawley Union High School.....	1	2.16
Burbank High School.....	6	3.16
Burlingame High School.....	33	2.67
Calxico Union High School.....	1	3.64
Calistoga Joint Union High School.....	3	2.05
Campbell Union High School.....	1	2.80
Canoga Park High School.....	1	2.26
Carmel High School.....	6	2.38
Carpinteria Union High School.....	3	1.75
Centerville: Washington Union High School.....	1	2.93
Chico High School.....	7	2.58
Chino High School.....	1	2.87
Claremont High School.....	3	2.21
Clovis Union High School.....	2	2.08
Coalinga Union High School.....	3	2.21
Colton Union High School.....	1	3.37
Colusa Union High School.....	1	Leave
Compton Union High School.....	1	2.19
Concord: Mt. Diablo Union High School.....	3	2.89
Corcoran Union High School.....	1	2.12
Corona Union High School.....	3	1.62
Coronado High School.....	7	2.91
Covina Union High School.....	5	2.50
Delano Joint Union High School.....	1	2.00
Downey Union High School.....	2	3.00

TABLE VIII (*Continued*)

	No. of Students 1944-47	Grade- Point Rating
El Centro: Central Union High School.....	6	2.19
El Cerrito High School.....	2	3.36
Elk Grove Union High School.....	1	2.27
El Segundo High School.....	2	2.39
Encinitas: San Dieguito Union High School.....	1	2.79
Escondido Union High School.....	1	2.93
Esparto Union High School.....	1	1.43
Etna Union High School.....	1	2.02
Eureka High School.....	5	2.35
Fair Oaks: San Juan Union High School.....	2	2.36
Fallbrook Union High School.....	1	3.33
Fort Bragg Union High School.....	2	2.15
Fowler Union High School.....	1	3.06
Fresno High School.....	14	2.47
Fresno Technical High School.....	1	Leave
Theodore Roosevelt High School.....	3	2.40
Thomas A. Edison High School.....	1	2.40
Fullerton Union High School.....	4	3.30
Gilroy Union High School.....	1	1.63
Glendale High School.....	14	2.69
Herbert Hoover High School.....	17	2.49
Gridley Union High School.....	1	3.53
Grossmont Union High School.....	4	2.57
Hanford Joint Union High School.....	3	1.93
Hayward Union High School.....	5	2.84
Healdsburg High School.....	4	2.49
Hollister: San Benito County High School.....	3	2.48
Huntington Beach Union High School.....	3	3.03
Huntington Park High School.....	7	2.53
Inglewood Union High School.....	3	2.65
Julian Union High School.....	1	1.94
Lafayette: Acalanes Union High School.....	1	3.57
Laguna Beach High School.....	1	2.67
La Jolla High School.....	4	1.96
Lakeport: Clear Lake Union High School.....	1	3.27
La Verne: Bonita Union High School.....	1	3.08
Lawndale: Adolph Leuzinger High School.....	2	2.95
Lindsay High School.....	4	1.76
Live Oak Union High School.....	1	2.65
Livermore Union High School.....	1	2.47
Livingston High School.....	1	2.62
Lodi Union High School.....	9	2.70
Long Beach: David Starr Jordan High School.....	2	2.09
Long Beach Polytechnic High School.....	11	2.65
Woodrow Wilson High School.....	4	3.01
Los Angeles: Abraham Lincoln High School.....	1	2.63
Alexander Hamilton High School.....	1	2.41
Belmont High School.....	1	2.13
Benjamin Franklin High School.....	3	1.90
Eagle Rock High School.....	1	2.54
Fairfax High School.....	10	3.14
George Washington High School.....	5	2.53
Hollywood High School.....	8	2.80
John H. Francis Polytechnic High School.....	2	2.96
John Marshall High School.....	6	2.51

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Los Angeles High School.....	55	2.65
Manual Arts High School.....	6	2.88
Susan M. Dorsey High School.....	5	2.57
Theodore Roosevelt High School.....	1	2.25
University High School.....	26	2.55
Woodrow Wilson High School.....	6	2.74
Los Gatos Union High School.....	4	2.83
McArthur: Fall River Joint Union High School.....	1	.79
Madera Union High School.....	4	2.87
Mariposa County Union High School.....	1	1.93
Marysville Union High School.....	1	1.94
Merced Union High School.....	4	2.81
Mill Valley: Tamalpais Union High School.....	18	2.19
Modesto High School.....	13	2.86
Monrovia: Monrovia-Arcadia-Duarte Union High School.....	6	2.59
Montebello High School.....	1	2.16
Mountain View Union High School.....	12	2.50
Napa Union High School.....	5	2.57
National City: Sweetwater Union High School.....	1	2.54
Newport Beach: Newport Harbor Union High School.....	2	2.14
North Hollywood High School.....	5	2.79
North Sacramento: Grant Union High School.....	2	2.58
Oakdale Union High School.....	1	2.69
Oakland: Castlemont High School.....	3	2.58
Fremont High School.....	1	2.47
Oakland High School.....	22	2.57
Oakland Technical High School.....	2	2.08
University High School.....	2	3.06
Ojai: Nordhoff Union High School.....	1	1.84
Ontario: Chaffey Union High School.....	3	2.59
Orange Union High School.....	1	2.31
Oroville Union High School.....	2	3.21
Oxnard Union High School.....	4	2.12
Pacific Grove High School.....	4	2.30
Palm Springs High School.....	2	2.65
Palo Alto High School.....	88	2.50
Pasadena High School.....	24	2.50
Patterson Union High School.....	1	1.81
Petaluma High School.....	10	2.15
Piedmont High School.....	42	2.52
Pittsburg High School.....	3	2.76
Pleasanton: Amador Valley Joint Union High School.....	1	2.30
Pomona High School.....	2	2.89
Porterville Union High School.....	3	3.25
Puente Union High School.....	1	1.58
Red Bluff Union High School.....	2	2.74
Redlands High School.....	4	2.75
Redondo Union High School.....	3	2.20
Redwood City: Sequoia Union High School.....	43	2.59
Reedley Joint Union High School.....	2	3.14
Richmond Union High School.....	5	2.53
Rio Vista Joint Union High School.....	1	3.37
Ripon Union High School.....	2	2.10
Riverdale Joint Union High School.....	1	2.64
Riverside Polytechnic High School.....	8	2.46

TABLE VIII (*Continued*)

	No. of Students 1944-47	Grade- Point Rating
Sacramento: McClatchy High School.....	6	2.53
Sacramento High School.....	16	2.57
Salinas Union High School.....	12	2.53
San Bernardino High School.....	7	2.43
San Diego: Herbert Hoover High School.....	4	2.88
Point Loma High School.....	15	2.46
San Diego High School.....	13	2.45
San Fernando High School.....	1	2.21
San Francisco: Abraham Lincoln High School.....	27	2.47
Balboa High School.....	3	2.17
Galileo High School.....	7	2.75
George Washington High School.....	20	2.44
High School of Commerce.....	7	2.30
Lowell High School.....	73	2.61
Mission High School.....	3	2.42
San Jose: Abraham Lincoln High School.....	19	2.47
San Jose High School.....	7	2.64
San Juan Capistrano: Capistrano Union High School.....	2	1.95
San Leandro High School.....	9	2.27
San Luis Obispo High School.....	4	2.83
San Mateo High School.....	31	2.49
San Pedro High School.....	3	2.42
San Rafael High School.....	2	2.54
Santa Ana High School.....	11	2.45
Santa Barbara High School.....	4	2.37
Santa Clara Union High School.....	3	2.70
Santa Cruz High School.....	1	2.39
Santa Maria Union High School.....	5	2.70
Santa Monica High School.....	8	2.60
Santa Paula Union High School.....	2	3.03
Santa Rosa High School.....	8	2.38
Santa Ynez Valley Union High School.....	1	2.11
Shafter High School.....	1	3.24
Sonora Union High School.....	1	2.59
Southgate High School.....	1	3.54
South Pasadena-San Marino High School.....	42	2.51
South San Francisco High School.....	2	2.63
Stockton High School.....	10	2.54
Strathmore Union High School.....	1	2.04
Sunnyvale: Fremont Union High School.....	2	2.51
Susanville: Lassen Union High School.....	1	.93
Taft Union High School.....	3	2.85
Torrance High School.....	2	2.54
Tulare Union High School.....	1	3.00
Tulelake: Tule Lake High School.....	3	2.69
Tustin Union High School.....	1	2.59
Vallejo High School.....	6	2.44
Van Nuys High School.....	6	2.17
Ventura Union High School.....	7	2.65
Vista High School.....	1	2.75
Watsonville Union High School.....	7	2.78
Westwood High School.....	1	1.33
Whittier Union High School.....	20	2.36
Willows: Glenn County High School.....	5	2.23
Wilmington: Phineas Banning High School.....	1	1.43

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Winters Joint Union High School.....	1	1.94
Woodland High School.....	2	2.05
Yuba City Union High School.....	3	2.33
<i>Canal Zone</i>		
Balboa Heights: Balboa High School.....	1	2.00
<i>Colorado</i>		
Colorado Springs High School.....	2	2.77
Denver: East High School.....	13	2.63
South High School.....	2	2.20
Fort Collins High School.....	2	2.62
Grand Junction High School.....	1	3.22
Greeley High School.....	1	1.66
La Junta High School.....	1	3.09
Lakewood High School.....	3	2.91
Littleton High School.....	1	1.97
Longmont High School.....	1	3.70
Loveland High School.....	1	1.69
Palisade High School.....	1	2.36
Pueblo: Centennial High School.....	1	2.68
Rye High School.....	1	.94
Trinidad High School.....	1	3.44
<i>Connecticut</i>		
Darien High School.....	1	2.75
New Haven High School.....	1	2.07
<i>Delaware</i>		
Lewes: Lewes Special School District.....	2	1.33
<i>District of Columbia</i>		
Anacostia High School.....	1	2.65
Central High School.....	1	2.30
Western High School.....	2	2.76
Woodrow Wilson High School.....	1	3.29
<i>Florida</i>		
Miami: Edison High School.....	1	2.96
Miami High School.....	3	2.41
<i>Georgia</i>		
Columbus High School.....	1	2.84
Crawford High School.....	1	2.36
Macon: A. L. Miller High School.....	1	2.72
Savannah High School.....	1	1.53
<i>Territory of Hawaii</i>		
Hamakuapoko: Maui High School.....	1	3.29
Hilo High School.....	4	2.17
Honolulu: Roosevelt High School.....	5	2.19
Kanai High School.....	1	2.48
<i>Idaho</i>		
Boise High School.....	4	2.99
Coeur d'Alene High School.....	2	1.43
Emmett High School.....	1	3.87
Filer Rural High School.....	1	3.46
Idaho Falls High School.....	4	2.38
Jerome High School.....	1	1.93
Kellogg: Wardner-Kellogg High School.....	1	2.92
Lewiston High School.....	4	2.38

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Malad City: Malad High School.....	1	1.86
Mountain Home High School.....	1	2.28
Nampa High School.....	2	3.01
Pocatello High School.....	1	2.42
Madison High School.....	1	3.05
Rupert High School.....	1	3.59
St. Anthony High School.....	1	2.61
Sandpoint High School.....	1	2.67
Twin Falls High School.....	4	2.96
<i>Illinois</i>		
Belvidere High School.....	3	2.59
Chicago: Austin High School.....	1	3.00
Crane Technical High School.....	1	1.80
Foreman High School.....	1	2.57
Harrison High School.....	1	2.73
Hyde Park High School.....	2	3.36
Lane Technical High School.....	2	2.01
McKinley High School.....	1	2.88
Robert A. Waller High School.....	1	1.95
Chicago Heights: Bloom Township High School.....	1	1.98
Decatur High School.....	1	2.05
Effingham High School.....	1	2.11
Elgin High School.....	1	2.91
Elvaston Consolidated High School.....	1	2.70
Evanston Township High School.....	6	2.82
Freeport High School.....	1	2.63
Harvey: Thornton Township High School.....	1	2.55
Highland Park High School.....	2	2.75
Hinsdale Township High School.....	3	2.34
Lake Forest High School.....	1	3.51
Milledgeville: Community High School.....	1	2.21
Moline High School.....	1	2.14
Oak Park Township High School.....	5	2.88
Oquawaka Township High School.....	1	3.31
Park Ridge: Maine Township High School.....	1	3.22
Peoria: Woodruff High School.....	1	2.31
Rockford High School.....	3	2.54
St. Charles Community High School.....	1	2.66
Wheaton Community High School.....	1	1.92
Winnetka: New Trier Township High School.....	20	2.53
<i>Indiana</i>		
Anderson High School.....	1	2.18
Bedford High School.....	1	2.24
East Chicago: Washington High School.....	1	2.00
Elkhart High School.....	1	2.33
Ft. Wayne: North Side High School.....	1	2.98
Kingman High School.....	1	.85
Terre Haute: Wiley High School.....	2	2.87
Vincennes: Lincoln High School.....	1	3.27
<i>Iowa</i>		
Cedar Falls High School.....	1	3.78
Cedar Rapids: Franklin High School.....	1	4.00
Chelsea Independent High School.....	1	2.25
Coon Rapids High School.....	1	3.10
Dallas Center High School.....	1	2.91

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Davenport High School.....	1	2.36
Des Moines: Roosevelt High School.....	1	3.46
Ft. Dodge High School.....	1	3.14
Grinnell High School.....	1	2.06
Ida Grove High School.....	1	3.21
Iowa City High School.....	1	2.69
Keokuk High School.....	1	2.73
Lorimor High School.....	1	2.92
Rockwell City High School.....	1	3.34
Sioux City: Central High School.....	3	2.76
Waterloo: West High School.....	1	3.31
<i>Kansas</i>		
Abilene High School.....	2	2.46
Colby Community High School.....	1	2.39
Concordia High School.....	1	2.64
Ellsworth High School.....	1	2.87
Emporia High School.....	1	2.18
Halstead High School.....	1	2.51
Howard High School.....	1	2.80
Junction City High School.....	1	3.80
Leavenworth High School.....	1	3.59
Lincoln High School.....	1	2.20
Merriam: Shawnee Mission High School.....	1	2.96
Oberlin: Decatur Community High School.....	1	1.25
Pittsburg High School.....	1	2.96
St. Francis: Community High School.....	1	3.45
St. John: Antrim Rural High School.....	1	.89
St. John High School.....	1	1.96
Salina High School.....	1	2.87
Topeka High School.....	2	3.46
Wichita High School East.....	3	2.59
Wichita High School North.....	1	2.36
Winfield High School.....	2	3.28
<i>Kentucky</i>		
Covington: Holmes High School.....	1	3.76
Danville High School.....	1	2.23
Valley Station: Valley High School.....	1	.62
<i>Louisiana</i>		
New Orleans: Alcee Fortier High School.....	2	2.27
<i>Maryland</i>		
Baltimore City College School.....	1	2.87
Hyattsville High School.....	1	2.36
<i>Massachusetts</i>		
Brookline High School.....	1	3.64
Chelmsford High School.....	1	2.42
Lawrence High School.....	1	3.62
Medford High School.....	1	2.88
New Bedford High School.....	1	1.22
<i>Michigan</i>		
Ann Arbor High School.....	1	2.43
University High School.....	1	3.16
Birmingham: Baldwin High School.....	1	1.93
Detroit: Central High School.....	1	2.11
Eastern High School.....	1	2.58

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Northwestern High School.....	1	2.65
Grand Rapids: Union High School.....	1	.96
Neguanne High School.....	1	1.13
Plymouth High School.....	1	3.32
Traverse City: Central High School.....	1	2.89
<i>Minnesota</i>		
Buffalo High School.....	1	1.87
Chisholm State High School.....	1	2.96
Duluth: Central High School.....	1	2.31
Minneapolis: John Marshall High School.....	1	2.78
Southwest High School.....	2	2.75
University High School.....	2	2.51
Washburn High School.....	3	1.94
Remer High School.....	1	1.81
St. Paul: Central High School.....	1	3.44
South St. Paul High School.....	1	2.11
Winona High School.....	1	3.40
<i>Mississippi</i>		
Canton High School.....	1	2.27
Meridian High School.....	1	3.67
<i>Missouri</i>		
Clayton High School.....	1	2.85
Independence: William Chrisman High School.....	1	2.50
Kansas City: Northeast High School.....	1	2.13
Paseo High School.....	1	2.23
Southeast High School.....	11	2.92
Mountain Grove High School.....	1	1.18
Nevada High School.....	1	Leave
St. Joseph: Central High School.....	1	2.98
Lafayette High School.....	1	1.86
St. Louis: Southwest High School.....	1	1.33
Stover High School.....	1	2.39
<i>Montana</i>		
Anaconda High School.....	1	4.00
Billings High School.....	5	2.21
Butte High School.....	2	3.18
Conrad High School.....	2	1.75
Dillon: Beavershead County High School.....	1	Leave
Fort Peck High School.....	1	2.19
Great Falls High School.....	5	2.56
Harlowton High School.....	1	2.52
Helena High School.....	3	2.75
Park County High School.....	1	1.71
Malta High School.....	1	3.49
Missoula: Missoula County High School.....	2	2.27
Stanford High School.....	1	1.44
<i>Nebraska</i>		
Bayard High School.....	1	2.00
Fremont High School.....	1	1.85
Gering High School.....	1	2.10
Grand Island High School.....	1	2.43
Hastings High School.....	1	2.20
Lincoln High School.....	1	2.92
Omaha: Benson High School.....	1	3.34

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Central High School.....	2	2.81
Omaha Technical High School.....	1	2.00
Scottsbluff High School.....	1	2.02
Wilbur High School.....	1	2.36
<i>Nevada</i>		
Carson City High School.....	1	3.00
Elko County High School.....	3	2.47
Ely: White Pine County High School.....	1	1.62
Las Vegas High School.....	3	3.18
Reno High School.....	2	2.77
Smith: Smith Valley High School.....	1	2.22
<i>New Hampshire</i>		
Woodsville High School.....	1	3.19
<i>New Jersey</i>		
Bound Brook High School.....	1	2.88
East Orange High School.....	1	3.61
Haddonfield Memorial High School.....	1	2.07
Irvington High School.....	2	1.96
Montclair High School.....	1	2.64
Mountain Lakes High School.....	1	2.75
Newark: South Side High School.....	1	2.43
Ocean Grove: Neptune High School.....	1	3.17
Palmyra High School.....	1	1.63
Patterson: Eastside High School.....	1	2.13
Phillipsburg High School.....	1	2.30
Ridgewood High School.....	1	2.36
Summit High School.....	1	2.30
Teaneck High School.....	1	1.59
<i>New Mexico</i>		
Albuquerque High School.....	3	2.03
Aztec High School.....	1	.93
Capitan Union High School.....	1	2.91
Carlsbad High School.....	1	2.08
Clovis High School.....	1	1.44
Deming High School.....	1	2.83
Raton High School.....	1	2.34
Roswell: New Mexico Military Institute.....	14	2.33
Roswell High School.....	1	1.67
Santa Fe High School.....	2	1.72
Silver City: Teachers College High School.....	1	1.69
<i>New York</i>		
Bronxville High School.....	2	2.72
Brooklyn Technical High School.....	1	2.48
Erasmus Hall High School.....	1	2.12
Franklin K. Lane High School.....	1	2.66
James Madison High School.....	1	3.00
New Utrecht High School.....	1	3.53
Buffalo: Fosdick-Masten Park High School.....	1	0.00
Fairport High School.....	1	3.10
Flushing High School.....	1	2.14
Forest Hills High School.....	2	2.54
Hempstead High School.....	1	2.14
Lackawanna High School.....	1	2.93
Mamaroneck High School.....	3	1.91

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Manhasset High School.....	1	2.78
Mincola High School.....	1	1.53
New Rochelle High School.....	1	2.65
New York: Christopher Columbus High School.....	1	2.23
Curtis High School.....	1	2.96
Dewitt Clinton High School.....	1	2.72
High School of Commerce.....	1	2.07
High School of Music and Art.....	2	2.97
High School of Science.....	1	2.84
Hunter College High School.....	3	3.11
Julia Richman High School.....	1	2.69
Stuyvesant High School.....	2	2.97
Washington Irving High School.....	1	4.00
Niagara Falls High School.....	1	.96
North Tonawanda High School.....	1	2.70
Rochester: Brighton High School.....	2	2.87
John Marshall High School.....	1	2.75
Monroe High School.....	1	2.38
West High School.....	1	3.28
Rockville Center: South Side High School.....	1	2.64
Roscoe Central School.....	1	.75
Scarsdale High School.....	3	3.38
Snyder: Amhurst Central High School.....	1	1.88
Staten Island: Curtis High School.....	1	Leave
Utica: Thomas R. Proctor High School.....	1	2.59
Utica Free Academy.....	1	2.83
Walton High School.....	1	2.79
White Plains High School.....	4	2.21
<i>North Carolina</i>		
Asheville: Lee H. Edwards.....	1	3.13
Star High School.....	1	2.00
<i>North Dakota</i>		
Bismarck High School.....	1	3.19
Lakota High School.....	1	2.23
<i>Ohio</i>		
Akron: North High School.....	1	2.80
West High School.....	1	2.56
Ashland High School.....	1	3.62
Ashtabula: Harbor High School.....	1	2.56
Chagrin Falls: Orange High School.....	1	1.57
Cincinnati: Walnut Hills High Schools.....	1	2.69
Withrow High School.....	2	2.76
Cleveland: John Adams High School.....	1	3.17
Shaker Heights High School.....	1	2.15
West High School.....	1	3.80
Dayton: Fairview-White High School.....	1	2.02
Oakwood High School.....	1	3.21
East Cleveland: Shaw High School.....	3	2.80
Euclid: Shore High School.....	1	1.84
Grover Hill High School.....	1	3.10
Middletown High School.....	1	2.13
New London Village Schools.....	1	2.93
New Philadelphia High School.....	1	2.80
Painesville: Thomas W. Harvey High School.....	1	2.47
Rocky River High School.....	1	2.07

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Toledo: De Vilbiss High School.....	1	2.81
Van Wert High School.....	1	2.05
Warren: Warren G. Harding High School.....	1	2.00
<i>Oklahoma</i>		
Alva High School.....	1	2.22
Bartlesville: College High School.....	1	2.09
Blackwell High School.....	1	3.69
Elk City High School	1	2.77
Enid High School.....	1	3.00
McAlester High School.....	2	2.70
Muskogee: Central High School.....	1	3.00
Norman High School.....	1	.94
Oklahoma City: Central High School.....	1	1.50
Classen High School.....	4	2.84
Northeast High School.....	1	3.87
Pauls Valley High School.....	1	2.25
Poteau High School.....	1	2.40
Skiatook High School.....	1	1.86
Stillwater High School.....	1	.79
Tulsa: Central High School.....	6	2.75
Will Rogers High School.....	3	2.39
Union City High School.....	1	1.92
<i>Oregon</i>		
Ashland High School.....	4	2.52
Astoria High School.....	2	3.08
Bandon High School.....	1	2.98
Colton High School.....	1	3.77
Corvallis High School.....	1	3.47
Eugene High School.....	1	2.61
University High School.....	1	2.69
Grants Pass High School.....	3	3.12
Gresham Union High School.....	1	3.13
Hillsboro High School.....	3	2.44
Jordan Valley High School.....	1	2.40
Klamath Falls: Klamath Union High School.....	3	2.71
Lakeview High School.....	1	2.17
McMinnville High School.....	1	2.38
Medford High School.....	2	2.08
Milwaukie Union High School.....	1	2.15
Oregon City High School.....	1	2.74
Portland: Benson Polytechnic High School.....	2	2.00
Franklin High School.....	2	2.84
Grant High School.....	28	2.45
Jefferson High School.....	7	3.25
Lincoln High School.....	21	2.52
Roosevelt High School.....	1	2.00
Washington High School.....	9	2.96
Salem High School.....	4	2.99
Woodburn High School.....	1	2.94
<i>Pennsylvania</i>		
Altoona High School.....	1	2.64
Berrysburg High School.....	1	2.39
Cambridge Springs High School.....	1	1.71
Corry High School.....	1	1.81
Edgewood High School	3	2.99

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Erie: Academy High School.....	1	1.74
Strong Vincent High School.....	1	2.56
Etna High School.....	1	2.07
Franklin High School.....	1	3.13
Johnstown Central High School.....	2	2.47
Ligonier High School.....	1	2.35
Nescopeck High School.....	1	1.73
Philadelphia: Central High School.....	1	2.32
Frankford High School.....	1	2.54
Springfield Township High School.....	1	2.73
Pittsburgh: Mount Lebanon High School.....	1	2.26
Renovo High School.....	1	2.71
Rimersburg: Rimersburg-Madison Joint High School.....	1	1.33
Sharon High School.....	1	2.24
Washington: Trinity High School.....	1	2.54
<i>Puerto Rico</i>		
Santurce: Central High School.....	1	2.86
<i>Rhode Island</i>		
East Providence High School.....	1	3.72
<i>South Dakota</i>		
Huron High School.....	1	1.25
Selby High School.....	1	1.72
Sioux Falls: Washington High School.....	1	1.92
<i>Tennessee</i>		
Memphis: Central High School.....	1	2.43
<i>Texas</i>		
Amarillo High School.....	1	1.94
Corsicana High School.....	1	1.06
Dallas: Highland Park High School.....	3	2.99
Lincoln High School.....	1	1.38
El Campo High School.....	1	Leave
Elkhart High School.....	1	2.70
El Paso: Austin High School.....	2	2.84
El Paso High School.....	2	3.26
Forsan High School.....	1	.44
Fort Worth: Amon G. Carter Riverside High School.....	1	2.85
R. L. Pashal High School.....	1	2.80
Goose Creek: Robert E. Lee High School.....	1	1.98
Hallettsville High School.....	1	2.53
Harlingen High School.....	1	2.31
Houston: San Jacinto High School.....	1	2.81
Laredo: Martin High School.....	1	Leave
McKinney: Boyd High School.....	3	2.37
Port Lavaca High School.....	1	2.27
San Antonio: Alamo Heights High School.....	2	3.32
Brackenridge High School.....	1	1.56
Sherman High School.....	1	2.48
Sinton High School.....	1	.53
Westbrook High School.....	1	3.13
<i>Utah</i>		
American Fork High School.....	1	1.14
Cedar City High School.....	1	2.94
Logan High School.....	1	2.98
Moab: Grand County High School.....	1	2.79

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Ogden High School.....	2	2.65
Park City High School.....	1	2.00
Price: Carbon County High School.....	1	2.24
Provo High School.....	1	1.55
Salt Lake City: East High School.....	6	2.47
Irving and South High School.....	1	1.90
West High School.....	1	2.00
Sandy: Jordan High School.....	1	2.46
Spanish Fork High School.....	1	Leave
<i>Vermont</i>		
Essex Junction High School.....	1	1.39
<i>Virginia</i>		
Critz: Hardin Reynolds Memorial School	1	3.00
Lexington High School.....	1	2.10
Portsmouth: Woodrow Wilson High School.....	1	1.72
<i>Washington</i>		
Aberdeen: Weatherwax High School.....	1	2.51
Bellevue: Overlake High School.....	1	1.86
Bellingham High School.....	3	2.50
Bothell High School.....	1	2.40
Bremerton High School.....	2	2.14
Carnation: Tolt High School.....	1	2.79
Colfax High School.....	1	2.09
Dayton High School.....	2	2.60
Ellensburg High School.....	3	3.65
Elma High School.....	1	2.08
Everett High School.....	9	2.45
Grand Coulee High School.....	1	2.14
Grandview High School.....	1	2.56
Kirkland High School.....	1	2.13
Leavenworth High School.....	1	2.36
Longview: R. A. Long High School.....	2	2.21
Lynden High School.....	3	2.16
Mt. Vernon Union High School.....	1	3.45
Pasco High School.....	1	2.76
Pine City High School.....	1	2.69
Port Angeles: Roosevelt High School.....	1	2.47
Prosser High School.....	1	1.63
Pullman High School.....	1	3.49
Raymond High School.....	1	2.70
Richland: Columbia High School.....	1	2.27
Seattle: Broadway High School.....	2	1.29
Franklin High School.....	7	2.39
Garfield High School.....	4	2.78
Highline High School.....	1	1.34
Lincoln High School.....	2	2.65
Queen Anne High School.....	7	3.06
Roosevelt High School.....	10	2.82
West Seattle High School.....	3	2.39
Silverdale: Central Kitsap High School.....	1	2.97
Spokane: Lewis and Clark High School.....	11	2.57
North Central High School.....	2	2.13
Tacoma: Clover Park High School.....	4	3.38
Fife High School.....	1	2.67
Lincoln High School.....	2	2.65

TABLE VIII (Continued)

	No. of Students 1944-47	Grade- Point Rating
Stadium High School.....	10	2.41
Walla Walla High School.....	1	2.83
Wenatchee High School.....	2	2.64
Wilbur High School.....	1	3.02
Yakima High School.....	1	2.69
Zillah High School.....	1	2.38
<i>West Virginia</i>		
Martinsburg High School.....	1	1.14
<i>Wisconsin</i>		
Appleton High School.....	1	1.86
LaCrosse Rural High School.....	1	2.26
Madison: West High School.....	1	2.20
Wisconsin High School.....	1	2.15
Milwaukee: Boys' Technical High School.....	1	Leave
Juneau High School.....	1	2.71
South Division High School.....	1	2.84
Washington High School.....	1	2.68
West Division High School.....	1	2.74
Whitefish Bay High School.....	1	3.34
New Richmond High School.....	1	2.37
Oshkosh High School.....	1	2.36
Racine: William Horlick High School.....	1	3.04
Superior: Central High School.....	2	1.98
Thorp High School.....	1	3.00
<i>Wyoming</i>		
Buffalo: Johnson County High School.....	1	1.78
Cheyenne High School.....	1	1.67
Lowell High School.....	1	2.63
Lusk High School.....	1	2.16
Rock Springs High School.....	2	3.37
Thermopolis: Hot Springs County High School.....	1	2.53

FROM PREPARATORY SCHOOLS IN FOREIGN COUNTRIES

	No. of Students 1944-47	Grade- Point Rating
<i>Argentina</i>		
Buenos Aires: American High School.....	2	1.99
<i>Brazil</i>		
São Paulo Graded School.....	1	2.31
<i>Canada</i>		
British Columbia		
Shawnigan Lake School.....	2	2.11
Vancouver Technical Schools.....	1	2.51
York House School.....	1	1.70
Victoria: Oak Bay High School.....	1	2.13
Ontario		
St. Catherine's Ridley College.....	1	2.00
Toronto: Danforth Technical School.....	1	1.12
Havergal College	1	1.66
Saskatchewan		
Lang High School.....	1	3.11
<i>Chile</i>		
Santiago: Instituto de Humanidades.....	1	1.76

TABLE VIII (*Concluded*)

	No. of Students 1944-47	Grade- Point Rating
<i>China</i>		
Hong Kong: Diocesan Girls' School.....	1	3.25
Tientsin: German School.....	1	3.36
<i>Colombia</i>		
Bogotá: Gimnasio Femenino	1	2.07
<i>Costa Rica</i>		
Cartago: San Luis Gonzaga College.....	1	1.57
San Jose: Colegio Seminario.....	1	3.11
El Liceo de Costa Rica.....	1	3.00
<i>Ecuador</i>		
Quito: Military Academy.....	1	2.37
<i>England</i>		
Bucks: St. Bernard's Convent.....	1	2.45
Cheltenham Ladies' College.....	1	2.69
Harrow Technical School of Harrow County School.....	1	2.45
<i>India</i>		
Mussoorie: Woodstock School.....	1	2.55
Naini Tal: St. Joseph's College.....	1	3.23
<i>Ireland</i>		
Dublin: The High School.....	1	3.23
<i>Nicaragua</i>		
Managua: La Salle College.....	1	2.19
<i>Peru</i>		
Chosica: Santa Rosa School.....	1	1.93
Lima: Colegio Santa Maria.....	1	1.50
<i>Philippine Islands</i>		
Dumaguete: Silliman University High School.....	1	2.40
Manila: Santa Tomas Internment Camp School.....	8	1.75
<i>Salvador</i>		
San Salvador: Colegio Salesiano "Santa Cecilia"	1	2.07
<i>Turkey</i>		
Adana Lyceum	2	2.05
Aksebir: Military Lise.....	1	2.33
Bursa Military Lycee.....	1	2.77
Diyaribakir Lycee	1	2.99
Istanbul: Turkish Naval Lycee and War College.....	2	2.74
Konya: Military Lise.....	2	2.70
Kuleli: Military Lycee of Kuleli	4	3.34
Yozgat Lyceum	1	2.17
<i>Venezuela</i>		
Caracas: Colegio Americano.....	2	3.07

TABLE IX
DEGREES GRANTED 1946-47

	Ph.D.	M.D.	LL.M.	LL.B.	Ed.D.	Engr.	M.B.A.	A.M.	M.S.	A.B.	B.S.
School of Biological Sciences...	2	..	..	..	..	..	..	11	..	79	..
Graduate School of Business....	..	..	..	..	..	..	164	..	..	..	..
School of Education.....	2	..	..	..	21	..	..	109	..	53	..
Physical Therapy .....	..	..	..	..	..	..	..	2	..	..	..
School of Engineering.....	..	..	..	..	..	..	..	..	..	..	14
Civil Engineering .....	..	..	..	..	..	2	..	1	23	..	..
Electrical Engineering	1	..	..	..	..	9	..	25	36	..	..
Engineering Chemistry .....	..	..	..	..	..	1	..	..	..	..	..
Engineering Science .....	..	..	..	..	..	..	..	..	3	..	..
Mechanical Engineering	1	..	..	..	..	..	..	4	58	..	..
Mining Engineering	1	..	..	..	..	3	..	5	14	..	..
School of Humanities .....	..	..	..	..	..	..	..	..	..	158	..
English	2	..	..	..	..	..	..	5	..	..	..
Graphic Art .....	..	..	..	..	..	..	..	4	..	..	..
Philosophy .....	..	..	..	..	..	..	..	1	..	..	..
Romanic Languages	3	..	..	..	..	..	..	1	..	..	..
Speech and Drama	1	..	..	..	..	..	..	3	..	..	..
School of Law .....	..	..	2	48	..	..	..	..	..	..	..
Pre-Legal Curriculum .....	..	..	..	..	..	..	..	..	..	68	..
School of Medicine .....	..	61	..	..	..	..	..	..	..	35	..
Bacteriology	1	..	..	..	..	..	..	2	..	..	..
Nursing Curriculum .....	..	..	..	..	..	..	..	..	..	35	..
Physiology	1	..	..	..	..	..	..	2	..	..	..
School of Mineral Sciences....	..	..	..	..	..	..	..	..	..	..	7
School of Physical Sciences....	..	..	..	..	..	..	..	..	1	1	4
Chemistry	5	..	..	..	..	..	..	10	8	..	..
Geology .....	..	..	..	..	..	..	..	1	1	..	..
Mathematics .....	..	..	..	..	..	..	..	2	2	..	..
Physics	1	..	..	..	..	..	..	..	..	..	..
School of Social Sciences....	..	..	..	..	..	..	..	..	..	573	..
Economics	2	..	..	..	..	..	..	8	..	..	..
History	4	..	..	..	..	..	..	19	..	..	..
International Relations .....	..	..	..	..	..	..	..	3	..	..	..
Journalism .....	..	..	..	..	..	..	..	14	..	..	..
Political Science	2	..	..	..	..	..	..	12	..	..	..
Psychology	4	..	..	..	..	..	..	18	..	..	..
Sociology .....	..	..	..	..	..	..	..	2	..	..	..
At Large .....	..	..	..	..	..	..	..	..	..	48	..
Total	33	61	2	48	21	15	164	269	146	1,050	18

TABLE IX (*Concluded*)
SUMMARY OF DEGREES GRANTED 1946-47

	September	January	April	June	Total	Men	Women
Bachelor of Arts	124	137	185	604	1,050	647	403
Bachelor of Science	19	34	43	98	194	183	11
Master of Arts	90	45	25	109	269	193	76
Master of Science.....	..	..	22	124	146	144	2
Master of Business Administration	18	12	22	112	164	160	4
Engineer	4	3	5	3	15	15	..
Doctor of Education	3	5	6	7	21	15	6
Bachelor of Laws.....	4	7	2	35	48	45	3
Master of Laws.....	1	..	1	..	2	2	..
Doctor of Medicine .....	..	..	..	61	61	58	3
Doctor of Philosophy.....	13	5	6	9	33	26	7
Total	276	248	317	1,162	2,003	1,488	515

H. DONALD WINBIGLER, *Registrar*

APPENDIX V

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(Compiled in the Reference Division of the Stanford University Library)

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