Report of the President 1972-1973 RICE UNIVERSITY



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The Cover: Jim Caldwell '71 photographed the quadrangle for this report in February 1974.

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A Year of Continued Impact

The Report of the President 1972-1973 By NORMAN HACKERMAN

Possibly the most significant fact about Rice during the 1972-1973 academic year was the University's continuing ability to have an impact far beyond its size. While the momentum for such an impact has been an important part of Rice since its inception, it is gratifying to note that the University's ability to contribute to the various communities it serves remained stable in the face of serious material restraints. There was virtually no physical growth during the year; there was even some contraction in areas which did not affect the quality of our important programs.

Toward a Balaneed Budget

Proof of our success—of doing the same job with less money—was given in the year under review: As of June 30, 1973, we were able to present a fiscal report balanced to within \$10,000 due to a change in policy by the Board of Governors and economies instituted by faculty and staff in their departments and activities. The result was to transform a potential \$2 million deficit into a break-even fiscal year.

The 1973-1974 budget is also balanced. It may even show a slight surplus unless inflationary pressures wipe out this currently anticipated surplus. For example, we already know that the cost of our utilities will increase by at least \$50,000 during the coming academic year. We expect a similar rise in the cost of food for our colleges.

Holding the Line

While these increased costs of food will have to be passed through to the students, tuition has not been



raised during the 1972-1973 academic year and will remain the same through 1974-1975. It is difficult to predict at this time whether we can hold the line on tuition beyond that period which will mark a five-year span without an increase. During this period virtually all other colleges and universities raised their tuition by \$1,000 or more per year. There is a curious link between tuition and the continuing search for wider financial support. Some potential donors to the University have taken the view that increased income from tuition should go hand in hand with wider outside support.

After saying all this, it must be remembered that nationally the cost of educating the individual student has risen substantially. Here at Rice this cost has remained relatively stable over the last several years because of the savings effected by faculty and staff. However, we cannot economize further without detriment to the academic quality.

Overall, the University's financial position can be described as satisfactory, an enviable position in an era in which private education generally is experiencing great financial difficulties. At the same time, Rice's level of quality remains high. Its mission continues in accordance with the University's traditional commitment to excellence. Given this commitment, we have continued to examine possible new programs and to explore new directions for existing programs even though the likelihood of being able to actually start new projects is not as great as it once was. However, it should be clearly understood that we have not and will not put a blanket over the University. We want our people, faculty, staff, and students, to be constantly on the lookout for new ways in which Rice can be useful to the communities it serves.

Music and Fine Arts

One indication of this approach is the opening of the Shepherd School of Music which got under way with the appointment of Samuel Jones as director. Dr. Jones is now in the process of developing a faculty and a program fitted to our needs. It will ultimately entail construction of a new building, the first to be started since the 1969 groundbreaking for Cleveland Sewall Hall. In this connection it is well to remember that the Shepherd School of Music was made possible through a substantial endowment. It is a telling example of how new and desirable programs are made possible if significant support for them becomes available.

Another highlight of our efforts in the fine arts area was the start of conversations leading to an additional five-year commitment of generous support from the Ménil Foundation. While this material support from Dominique and the late John de Ménil has helped significantly in broadening our offerings in the fine arts area, the de Ménils have also contributed constructively to the humanistic content of life on campus. Beyond the campus itself, the larger community also benefited from Mrs. de Ménil's unique and widely recognized talent as planner and creator of outstanding art exhibits that drew not only critical acclaim but also enthusiastic viewers from the Rice community and the general public. By reallocating some University resources, Rice itself has increased its own commitment to the fine arts program with dollar support. In this manner we shall be able to retain much of what has been developed over the past several years not only in the Department of Fine Arts but also in the Media Center and in the Institute for the Arts.

Start of Management Science

Also during 1972-1973 we continued our search for ways to initiate a projected program in management science. Toward the end of the year, with considerable ingenuity and imagination, a faculty group headed by Professor Gaston V. Rimlinger, Chairman of the Department of Economics, developed a promising plan for an undergraduate program in managerial studies. It is designed to meet the interest of many of our students in acquiring greater insight into and understanding of business—including small business, commerce, and industry. This program will use existing faculty and facilities without additional cost to the University. Professor Rimlinger's group designed the program just as the sheltered courses of the Commerce Department were being phased out after extended faculty scrutiny and deliberation. All sheltered academic programs at Rice have thus been ended.

While this is an important development within our undergraduate curriculum, we continue to maintain considerable interest in the area of management education at an advanced level—the first post-baccalaureate degree level. In studying possibilities in this area, it

appeared that the best way to make a beginning was not to try the formation of a fully developed graduate school of management or business but rather to choose one aspect within this large purview and concentrate on it, using it as a spearhead for a more comprehensive program at some future date. The one area we finally chose is accounting, where we are now prepared to make an appointment to an endowed chair.

Professional and Talent Orientation

I have cited our offerings in business and the arts so closely together to underline the University's growing interest in professional areas and their linkage with Rice's traditionally strong programs in the humanities, science, and engineering. Our new activities in the Shepherd School of Music and in business education add importantly to the kind of professional preparation formerly offered primarily through our School of Architecture.

Our heightened emphasis on professional preparation runs parallel to the growing interest of current students in those disciplines that have a direct societal impact, such as medicine, law, and engineering. This change in the interests of students has been noticeable on campus during the past few years, coupled with a somewhat lower demand for the ongoing academic offerings. I consider this a reasonable development and it is no different from similar trends at other universities. Still, it is just possible that here and elsewhere there was a mounting overemphasis on academically oriented offerings. Most graduate students, for example, tended to emulate their professors and prepared themselves only for college and university teaching careers. The result has been an oversupply of faculty members, rendered even more acute by the constraints many institutions have had to impose upon their growth patterns.

At present the number of people going into advanced work, particularly those interested in university appointments, has diminished markedly. In fact much of today's graduate study is aimed at professional career preparation. This trend is not confined to graduate students. An increasing number of our undergraduates in engineering, for example, are already making use of their training on campus to go directly into jobs. If they are going to further their education along the line, it will probably be in the currently more usual fashion of discontinuous later education, rather than in immediate on-going graduate studies.

The shift toward professional emphasis will require some reexamination of the way in which Rice chooses its students. After all, when you choose people for a fine arts program or a music program, you must look at talent that is not ordinarily measured by the same criteria that have almost completely ruled our admissions procedures in the past. The weight of academic aptitude, which will of course continue as a major factor in admissions generally, must therefore become somewhat less decisive in specific cases.

A Thorough Self-Study

Much of the foregoing is being reviewed in greater detail through Rice's self-study which has now been under way for more than 16 months.

A large percentage of the members of the campus community availed itself of the opportunity to be heard through this self-study. After the first draft of the self-study report had been completed, findings were discussed in a series of meetings by faculty, staff, and students. There was also significant input from alumni and from the community at large through questionnaires and interviews.

At the time of this writing it is still too early to predict what the self-study will ultimately produce. But it is already clear that it was thorough and exhaustive. Its final report will be submitted to the Southern Association of Colleges and Schools prior to the visit of its representatives to the Rice campus in May, 1974. The final report will also be used as a basic outline for the work of a projected Commission on Goals and Objectives for Rice University, the first body of its type in Rice history. The Commission will constitute a representative group of faculty, staff, students, alumni, and friends of the University. It may well be that the Commission will conclude that the goals and objectives Rice has enunciated for more than sixty years are still the same and should continue unchanged. On the other hand the Commission may suggest certain changes in traditional goals or new means of interpreting or implementing them. In any case, its members will have available to them all relevant documentation, including such landmark items as the Charter, the Book of the Opening, the proceedings and outcome of the court case of the early 1960s, the Ten-Year Plan published in 1965, and its subsequent revision. The final report of the Commission will be submitted to the University's Board of Governors for its consideration and such action as it may wish to take.

Communication on Campus

In addition to the self-study and the projected Commission, on-campus communication among all segments of the Rice community continued to improve through other mechanisms or media. Exchanges of views and ideas broadened through informal means such as conversations at Cohen House and through the open door policies of all academic and administrative offices. There were also more formal meetings from time to time that brought administrators closer to faculty, staff, and students.

Perhaps the most interesting development was the newly organized Faculty Club Forum which held its first meeting in July, 1972, at Cohen House. Each session brought me together with a limited number of faculty members and one or two administrators to discuss topics chosen by the faculty such as the sources of University funds, athletic programs, degree programs—to name just a few. Summaries of these sessions were

regularly published in *High Emprise*, which is mailed to all faculty, staff, and supporters of the University.

After the end of the academic year the summaries appeared as a collection titled *Faculty Club Forum* 1972-1973. The Forum generated correspondence, discussions, and conversations among individuals. Interest in the Forum remains consistently high and it is being continued this year.

The Library and ICSA

The two mainstays of any academic institution in the second half of the twentieth century are the library and the computer center or facility. Our Fondren Library continues to improve albeit at a lower rate than we would like to see. At the end of the year under review, the library had 737,792 volumes, a gain of 40,605 for the year. We are concerned about the impact of inflation on the prices of books and periodicals and its ultimate effect on our ability to maintain library collections that are adequate to support the University's teaching and research programs. Along with these problems there is the continuing challenge to optimize the retrieval of information from our library holdings.

In the computer area we had determined during the 1971-1972 academic year what sort of capability best suited our needs. During 1972-1973 our newly established Institute for Computer Services and Applications (ICSA) was thoroughly tested and began performing at expected levels with the help of a wise and dedicated director and staff who understand and can cope with operational and fiscal challenges as they present themselves.

The Drive for Support

Outside support for research and other types of study improved during the 1972-1973 academic year after some previous decline. Not only did the University's financial support for these purposes increase, but there was also marked improvement in the quality of the proposals our faculty members submitted. One of the more interesting grants we generated was a three-year \$250,000 allocation from the Alfred P. Sloan Foundation designed to enhance the education of Rice engineering students in the social sciences. Work funded by the Sloan grant is going forward with good results.

Other outside support has also been most welcome and continues apace while we are trying to further extend it. I may add here that each of the last two years saw annual giving to the University on the order of some \$4 million. This figure does not include the gift of the Rice Hotel from Houston Endowment, Inc., estimated to be worth some \$7 million. The entire Rice community may take a measure of satisfaction from the fact that the University ranks 14th in the percentage of alumni contributors and 13th in the size of gift per alumnus among the nation's major private colleges and universities. In recognition of this achievement Rice received a national award from the American

Alumni Council for our outstanding record in the development of alumni giving. Obviously this and other types of significant support are essential if Rice is to maintain its quality in the face of the immense difficulties continuing inflation poses.

For this reason we are also making concentrated efforts to increase the number of endowed chairs. We now have 29. Our immediate goal is to increase these to 50; but I am convinced that an even larger number of endowed chairs is eventually desirable for a university of Rice's stature in academe.

That place has been earned through the dedication and work of each component of the University. Some highlights of this work in the past year are given below:

Departmental Highlights

The Anthropology Department strengthened its program without increasing costs by cross-listing courses with other departments and through part-time faculty appointments. Our School of Architecture, for the first time in its history, admitted to its graduate program students with degrees in non-architectural fields.

All new faculty members in the Biochemistry Department secured external grants for the initiation of their research programs. These external funds, incidentally, rose from \$35,000 in 1971-1972 to \$207,537 in 1972-1973, the year in which, for the first time, biochemistry became a full-fledged department of the University. The Biology Department continues to attract a large proportion of Rice undergraduates. Approximately 12 to 13 percent of all upperclassmen are biology majors. This is particularly evident in the biology advanced electives which still have record enrollments. The Chemical Engineering Department secured some \$700,000 in external grants for research and Professor Roy Jackson was appointed to the A. J. Hartsook Chair in Chemical Engineering.

The Chemistry Department continues to have one of the heaviest undergraduate teaching loads on campus with freshman and sophomore laboratories filled to capacity. Its graduate and research programs continue to be lively and imaginative and add significantly to the nation's stockpile of scientific talent and knowledge. The department was further strengthened by the appointment of Ernest Wenkert to be E. D. Butcher Professor of Chemistry.

In our engineering divisions, the Department of Civil Engineering in cooperation with the School of Architecture has designed a graduate program in transportation at the master's level. In our Electrical Engineering Department a new undergraduate bioengineering program and a more comprehensive program in computer science and engineering covering hardware, software, and theory were instituted. The department also received grants totaling \$350,340 for the continuation of its research activities. The Environmental Science and Engineering Department received some \$121,200 in sponsored research and training grants, including an Environmental Protection Agency Training Grant. The Materials Science/Metallurgy Program received

accreditation from the Engineering Council for Professional Development, the nation's engineering curriculum evaluation authority.

The Mechanical Engineering Department conducted a complete self-study of its undergraduate program. As a result, we now offer degree options in six major areas of mechanical engineering.

The Physics Department introduced a self-paced version of its sophomore course and both years of the introductory physics sequence are now available in the new format. The Department of Space Physics and Astronomy (formerly Space Science Department) hosted a Conference on Magnetospheric Substorms in October, 1972. This meeting brought some 140 space physicists to the campus from various parts of the United States and Europe.

The Geology Department is actively pursuing the funding of the Carey Croneis Chair as a permanent memorial to the late Chancellor and Harry Carothers Wiess Professor of Geology. During the year funding of a \$110,000 Electron Microprobe/Scanning Electron Microscope was completed, also in honor of Dr. Croneis. It was installed and dedicated in his memory on Nov. 7, 1973. The Geology Department's program in marine science was strengthened through a five-year grant of \$200,000 for marine ecology and paleoecology from the Henry L. and Grace Doherty Charitable Foundation, by a faculty appointment in marine geology, and by the initiation of a cooperative program with the University of Texas Earth and Planetary Sciences Division of the Marine Biomedical Institute in Galveston. Another cooperative program was inaugurated with Texas Southern University, which does not have a geology department, to allow TSU students the opportunity to obtain bachelor's degrees in geology by taking advanced level courses at Rice.

The Program of Development Studies, an interdisciplinary group composed of Rice economists, anthropologists, and political scientists, secured grant renewals totaling \$346,434. In the Department of Economics and Accounting a new \$73,500 grant was received from the National Science Foundation to study the economics of network television regulation. In addition several accounting firms and alumni contributed \$6,000 to support students and faculty research in accounting.

The Education Department again proved the efficacy of its program by placing all its graduates in teaching positions, a remarkable achievement in a shrinking job market for teachers. The English Department added three new courses and its faculty received one Guggenheim and two Rice Research Grants.

There has been a decline in interest for some of our foreign language offerings, possibly in line with the national trend, although much of the decline seems to have halted. In the *French and Italian Department* elementary and intermediate courses are receiving closer supervision and a conversation course at the third-year level has been added at the request of students. The graduate program in the department has been reduced since the scholarships provided under the National

Defense Education Act are coming to an end. The curriculum of the *Department of German and Russian* now stresses the audio-lingual method and an early introduction of literary tests in language learning. Its advanced courses emphasize in-depth study of particular literary topics. Enrollment doubled in the *Department of Spanish*, *Portuguese*, and Classics. The department started a summer graduate program in Argentina. One Rice student received a scholarship from the Institute of Hispanic Culture to study in Argentina. Plans were initiated for a 1974 graduate summer program in Madrid.

The Department of Philosophy graduated nine majors during the year and hosted the annual meeting of the Southwestern Philosophical Society in November, 1972. "Symposium on Gilbert Ryle" was published during the year in the Rice University Studies based on the visit of this noted British philosopher to the campus in the spring of 1972. Another highlight was the appointment of Zeno Vendler to be the Carolyn and Fred McManis Professor of Philosophy. The Political Science Department continued to register increased enrollment. Its nine faculty members published a total of four books and six articles and presented four invited papers during the year.

Faculty members of the History Department continued to edit two distinguished scholarly journals: The Austrian History Yvarbook, edited by R. John Rath, and the Journal of Southern History, edited by S. W. Higginbotham. The department also publishes its own newsletter to keep its alumni abreast of career and personal developments. In the Sociology Department, the small faculty was able to enrich its offerings by a shift to a two-year planning cycle and by having each of the five faculty members offer a different set of courses in alternate years. The Psychology Department initiated its Ph.D. program during the year. The Department of Religious Studies was strengthened significantly by the gift of the Hazel and Harry Chavanne Chair of Religious Studies.

The end of the draft was probably responsible for the reduction in cadet enrollment for our *Military Science* course to 70 from 89 the preceding year. Fifteen midshipmen in *Naval Science* were commissioned during the year. The *Department of Health and Physical Education* was able to maintain its academic, intramural, and recreational programs with students, faculty, and alumni making maximal use of our gymnasium facilities. The department also completed plans to add a scientific foundation course to the curriculum.

In the Mathematics Department the freshman course was put on a self-paced basis with encouraging results and the program is being continued. Enrollment in the undergraduate courses of the Mathematical Science Department increased by 54 percent during the year.

Community Involvement

Each of these teaching and research activities helps the University deepen its expanding involvement with the larger community. This involvement includes not only the national and international scholarly and advisory relationships that usually come to mind, but also the civic, cultural, and educational affairs of the local community. In fact, our interest and participation in our local setting extends over wider areas and embraces more people than is generally realized. Although we don't keep statistics on such matters, growing numbers of faculty and staff members are active in a wide range of local activities in which Rice's role and contribution are clearly identified. Specifically, a few of these can be readily recognized: Rice, as an institution, is a component member of the Southwest Center for Urban Research (SCUR). We participate in its work through representation on its Board of Directors, faculty involvement in specific research projects, and a small financial contribution.

The school of Architecture reached beyond the campus during the year with the establishment of two important organizations: The Rice Design Alliance is addressing itself to the proposition that the most critical national challenge of the 1970s is the design and construction of humane communities within a quality environment. The Rice Center for Community Design and Research has become an important arm of the School of Architecture through its innovative programs of clinical education, environmental research and design and planning services for the Houston-Galveston area. On a smaller scale, Rice is involved with the In-Town Research Corporation, a neighborhood group concerned with the immediate campus vicinity including its business and residential areas. The group was given office space on campus during the year.

Members of the University community are active on the boards of museums, symphony orchestras and opera organizations. It also should be emphasized that our various athletic programs have had and continue to have a significant effect on our relations with the community at large.

Core of the Mission

Rice's community involvement is, of course, part of the total commitment to service to which the University has been dedicated since its inception. As such it is part of the impact Rice continues to make far beyond its size, as I observed at the start of this report.

In my conversations with leaders in the academic and business communities and in government I am always pleased to find that Rice ranks very high indeed. These men and women are not always able to give me specific reasons why their opinion of Rice is so favorable, but it is quite clear to me that their view of Rice is largely based on those of our alumni with whom they have come in contact.

This, of course, speaks well of Rice and the people who come here. Their general quality is such that they are noteworthy and this certainly makes Rice noteworthy.

Our most recent alumni, the Class of 1973, were

largely able to enter those areas in which they had an interest and for which they had prepared themselves. All who opted to enter medical or law schools and were recommended by the appropriate Rice faculty committees, were accepted. Many others went directly into jobs, including engineering and a wide variety of other professional and business activities. Fewer than in the past went on to graduate studies, but a goodly number still followed this course.

The capabilities of Rice students continue to be high, and they continue to be sought after and generally to impress their employers and associates.

These graduates are the ultimate purpose of our mission as a university. They benefited from being here and Rice was enriched by their presence on campus. The preservation and deepening of this reciprocity remains at the core of Rice's traditional commitment to excellence.

Student Statistics

CHARACTERISTICS OF THE FRESHMAN CLASS

	1970	1971	1972
Average College Board			
Scores	668	660	652
Scores by Division—			
Academic	654	655	642
Science	687	674	664
Engineering	671	654	649
Architecture	644	631	639
Scholastic Standing—			
National Merit			
Scholarships	59	65	56
Valedictorian	116	96	92
Salutatorian	35	39	38
Upper 5% of Graduat	ing		
Class	63%	65%	_
Upper 10% of Gradua	ting		
Class			78%
Number of Students			
Entering Freshmen	577	684	668
Men	427	526	509
Women	150	158	159

GEOGRAPHIC ANALYSIS OF STUDENT ENROLLMENT

	1970	1971	1972
Entering Freshmen—			
From Texas	361	410	421
From Other States	200	251	22 3
From Foreign Countries	16	23	24
Total Undergraduates—			
From Texas	1543	1576	1629
From Other States	794	881	919
From Foreign Countries	74	105	107
Graduate Students—			
From Texas	156	160	155
From Other States	392	349	348
From Foreign Countries	162	160	140

TOTAL ENROLLMENT

	1970	1971	1972
Enrollment—			
Undergraduate	2297	2454	2535
Fifth Year Students	114	108	120
Advanced Degree			
Students	699	656	624
Undesignated &			
Special Students	11	13	32
Grand Total	3121	3231	3311

STUDENT HONORS

Number of Students on the President's Honor Roll

	1970-71	1971-72	1972-73
Fall	848	953	1060
Spring	928	972	1059

Rice graduates of the Class of 1973 received a number of graduate fellowships and awards. One student turned down a Fulbright-Hayes grant to accept one of 30 Marshall Scholarships which were awarded in the United States. She will study at the London School of Economics and Political Science. Two other Rice graduates are the recipients of Thomas J. Watson Foundation Fellowships which provide them with a first postgraduate year of independent study and travel abroad. Only 70 Watson Fellowships are awarded annually. In addition six Rice graduates were awarded National Science Foundation Fellowships and 16 were named on the list of Honorable Mentions.

COMMENCEMENT

Combined Baccalaureate-Commencement ceremonies were held May 12, 1973. In order to focus more attention on those graduating, baccalaureate and commencement addresses were eliminated.

A comparative summary of degrees awarded from June 1971 through May 1973 follows:

Undergraduate Degrees	1971	1972	1973
Bachelor of Arts	465	448	544
Bachelor of Commerce	18	27	22
B.S. in Health and			
Physical Education	5		2
B.S. in Accounting	6	7	11
Bachelor of Architecture	25	21	19
Bachelor of Science			
Civil Engineering			6
Electrical Engineering			23
Mechanical Engineering	g —		11
Bachelor of Fine Arts			1
Total Undergraduate			
Degrees	519*	503	639

In addition to the research oriented programs in the Graduate Division leading to the degrees of Doctor of Philosophy, Master of Arts, or Master of Science. Professional Master's degrees are awarded in Architecture, Engineering, Materials Science, and Applied Mathematical Sciences.

Graduate Degrees	1971	1972	1973
Master of Chemical			
Engineering	18	21	15
Master of Civil			
Engineering	1	3	4
Master of Electrical			
Engineering	30	23	28
Master of Environmental			
Science			3
Master of Materials			
Science	1	1	
Master of Mechanical			
Engineering	15	8	12
Master of Applied			
Mathematical Sciences			2
Master of Architecture	11	12	7
Master of Architecture in			
Urban Design	10	7	6
Master of Arts	65	70	66
Master of Science	35	34	26
Doctor of Philosophy	128	104	94
Total Graduate Degrees	314	283	263
TOTAL DEGREES	833*	786*	902

^{*} Selective service regulations required students proceeding to fifth-year to postpone their B.A.'s in order to retain their student deferments.

Faculty Achievements and Honors

Salomon Bochner was listed in the first European edition of *Modern Men of Science*.

Ray M. Bowen began a two-year term as Treasurer of the Society for Natural Philosophy.

Franz R. Brotzen was awarded a one-year senior research fellowship by the West German government. He will pursue his studies at the Max Planck Institute für Metallforschung at the Technical University in Stuttgart. He is also Chairman of the Program Committee of the American Institute of Mining, Metallurgical and Petroleum Engineers.

Joseph M. Burns was appointed to the Census Advisory Committee of the American Economic Association and was elected to the Program Committee of the Western Economic Association. He was awarded a National Fellowship of the Hoover Institution at Stanford for the 1973-74 academic year as well as an Economic Policy Fellowship by the Brookings Institution which he declined.

James A. Castañeda was elected Vice President of the National Federation of Modern Language Teachers Associations (NFMLTA). The position carries automatic election to the presidency of NFMLTA in 1974. He is also in his third term as Executive Secretary of the South Central Modern Language Association and was made Titular Member of the Instituto de Cultura Hispánica de Madrid.

Alan J. Chapman was elected to a two-year term as President of the National Collegiate Athletic Association.

F. Chandler Davidson was recognized at the 24th Annual Texas Writers Roundup for his book *Biracial Politics*

One of three abstract tapestries woven and entered by Elinor L. Evans in the invitational Kansas Designer Exhibition at the University of Kansas won that exhibition's top award.

John W. Freeman, Jr., received the Beloit College Alumni Distinguished Service Citation and NASA's Exceptional Scientific Achievement Medal.

James B. Giles served on the Navy's National Scholarship Selection Committee which selected 1973-74

NROTC scholarship recipients from Texas, Oklahoma, Hawaii, the Canal Zone, Puerto Rico and Guam.

Joan R. Green was elected Vice Chairman of the Latin American Section of the American Association of Teachers of Spanish and Portuguese.

Norman Hackerman was reelected Chairman of the Board of Trustees of the Argonne Universities Association.

Joe W. Hightower was the 1973 winner of the American Chemical Society's Award in Petroleum Chemistry. The award recognizes Hightower for "outstanding achievements in petroleum chemistry, particularly research on catalysts."

William C. Howell has been elected a Fellow of the divisions of Experimental Psychology and Engineering Psychology of the American Psychological Association.

Captain Alan L. Jansen, U.S.N., served on the Navy's National Scholarship Selection Committee which selected 1973-74 NROTC Scholarship recipients from Texas, Oklahoma, Hawaii, the Canal Zone, Puerto Rico and Guam.

Konstantin Kolenda will spend the 1973-74 academic year as an Honorary Visitor to the King's College of the University of London.

At the invitation of the University of Oporto, Maria Teresa Leal de Martinez remained in Portugal after her 1971-72 sabbatical year to inaugurate the university's chair in Brazilian literature and to be Chairman of its Department of Romance Languages.

The Mentor Recognition Award, the Student Association's honor for "extraordinary services to the student body as an adviser, counselor, teacher or friend" was given to Michael V. McEnany.

Edward Norbeck became a Councilor of the American Anthropological Association.

Richard L. O'Keeffe was appointed to the five-member Committee on Data Bases of the Association of Research Libraries.

Thomas W. Parks was awarded a one-year senior research fellowship by the West German government to continue his work in digital signal processing at the University of Erlangen.

Gerald C. Phillips was elected to a one-year term as Vice Chairman of the Oak Ridge Associated Universities Council of Sponsors.

Florante Quiocho received a travel award from the Instituto Di Richerce Farmacologiche "Mario Negri" which permitted him to lecture at the International Symposium on Insolubilized Enzymes in Milan, Italy.

Madeleine Raaphorst was elected chairman of the 18th century section of the American Association of Teachers of French.

John R. Rath was named a corresponding member of the Austrian Academy of Science for his research in Austrian history.

Frederick D. Rossini was awarded the Redwood Medal of the Institute of Petroleum, United Kingdom, for his work in the thermodynamics, thermochemistry, and the composition of petroleum.

George J. Schroepfer, Jr., received a travel award

from the U.S. National Committee for the International Union of Biochemistry to permit him to attend the International Congress of Biochemistry in Stockholm, Sweden.

Robert V. Stevens was appointed to the editorial advisory board of the *Journal of Organic Chemistry*.

Charles R. Stewart was named one of the 17 Nicolas Salgo Distinguished Teachers in the United States for 1973.

Frank K. Tittel was awarded a one-year senior research fellowship by the West German government to pursue his laser physics studies at the University of Göttingen.

Radoslav A. Tsanoff was recognized for his book Civilization and Progress at the 24th Annual Texas Writers Roundup.

Stephen A. Tyler was appointed to a two-year term as a member of the Advisory Panel on Anthropology of the National Science Foundation and is an associate editor of the first *Annual Review of Anthropology*.

Frank E. Vandiver, a member of the National Council on the Humanities, was named Chairman of the Council's Education Subcommittee. He was also appointed to posts on two government committees: Chairman of the U. S. Army Military History Research Collection Advisory Committee and a member of the Selection Committee of the U. S. Air Force's Harmon Memorial Lecture Series. He is the recipient of the 1973 Regent's Award of the Lincoln Academy of Illinois, which is presented to the individual who best exemplifies the ideals and achievements of Abraham Lincoln. Dr. Vandiver was also appointed 1973-74 visiting professor of military history at the U. S. Military Academy at West Point.

Anestis S. Veletsos was elected a member of the Committee on Dynamic Forces of the Structural Division of the American Society of Civil Engineers (ASCE) and was appointed Chairman of the Task Committee on Natural Disasters of the Earthquake Engineering Research Institute. He was also appointed to the Control Group of the Joint Task Committee on Seismic Forces of the ASCE and the Structural Engineers Association of California.

Philip A. Wadsworth was appointed to the 20-member Advisory Committee of the Junior Year in France program, administered by Sweet Briar College, and was elected Secretary of the 17th century section of the American Association of Teachers in French.

Martin J. Wiener received a National Endowment for the Humanities Fellowship for 1973-74.

Major Ernest Young, U.S. Army, was awarded the Bronze Star for action in Viet Nam.

TEACHING AWARDS

George R. Brown Prize For Excellence in Teaching

Allen J. Matusow, Professor of History

George R. Brown Awards For Superior Teaching

Franz R. Brotzen, Professor of Materials Science Katherine Tsanoff Brown, Lecturer in Fine Arts Charles Garside, Jr., Associate Professor of History Alan Grob, Professor of English B. Frank Jones, Professor of Mathematics Trenton W. Wann, Professor of Psychology

Nicholas Salgo Distinguished Teacher Award

Charles R. Stewart, Assistant Professor of Biology

STAFF ACHIEVEMENTS AND HONORS

Shirley P. Allen was elected Secretary of the Houston Personnel Association.

Margaret S. Alsobrook was elected Secretary-Treasurer of the Southwest District of the American College Public Relations Association.

Daisy Ashford was elected Chairman of the Texas Regional Group of Catalogers and Classifiers of the Texas Library Association.

Rodney Borlase was appointed to two committees of the American Library Association: the Ad Hoc Committee to Study International Responsibilities and the Bibliography Committee.

Patsy Chappelear was elected Director of the Petroleum and Petrochemical Division of the American Institute of Chemical Engineers.

Augie Erfurth was named the Outdoor Track Coach of the Year for District 8 of the U.S. Track Coaches Association.

June Vermeulen was appointed to the American Library Association Membership Committee for Texas.

ADMINISTRATIVE APPOINTMENTS Effective July 1973 unless otherwise noted

William W. Akers, Assistant to the President for Development

Stephen Denio Baker, Master of Hanszen College
 Robert L. Bell, Jr., Director of Student Advising
 Martha L. Broussard, Administrative Assistant for
 Geology (Fall 1972)

Katherine Tsanoff Brown, Dean of Undergraduate Affairs

Joseph Cooper, Acting Provost

Katherine Drew, Acting Dean of Humanities and Social Sciences (Fall Semester 1973)

Edward O. Doughtie, Editor of Studies in English Literature

James Street Fulton, Acting Chairman of the Department of Philosophy

Walter W. Isle, Chairman of the Department of English Samuel Jones, Director of the Shepherd School of Music David L. Minter, Master of Baker College Nicolo Messana, Laboratory Coordinator in Biochemistry (September 1973)

G. King Walters, Chairman of the Department of Physics

Donald L. Williams, Executive Director of the Rice Center for Community Design and Research (February 1973)

APPOINTMENTS TO ENDOWED CHAIRS

Charles E. McLure, Allyn R. and Gladys M. Cline Professor of Economics and Finance

Zeno Vendler, Carolyn and Fred McManis Professor of Philosophy

Ernest Wenkert, E. D. Butcher Professor of Chemistry

TRUSTEE DISTINGUISHED PROFESSOR

Floyd S. Lear, History

EMERITUS FACULTY Effective July 1, 1973

Carroll Camden, Professor of English
A. P. McDonald, Professor of Engineering Graphics
Radoslav Andrea Tsanoff, Carolyn and Fred McManis
Professor of Philosophy

Philip A. Wadsworth, Professor of French

FACULTY APPOINTMENTS 1973-74

Professors

Robert L. Bell, Psychology
Joseph M. Gay, Jr. (Colonel, U.S. Army), Military
Science
Samuel Jones, Music
Graham A. Palmer, Biochemistry
Zeno Vendler, Philosophy
Ernest Wenkert, Chemistry

Associate Professors

Adele Marie de Souza Santos, Architecture Antonio Paulo de Souza Santos, Architecture Donald L. Williams, Architecture and Community Development

Assistant Professors

Susan Louise Clark, German
Margret Eifler, German
Sarah Burnett Frates, Psychology
Huey W. Huang, Physics
Werner H. Kelber, Religious Studies
Jane Chance Nitzsche, English
John S. Olson, Biochemistry
Edward W. Page, Electrical Engineering

Panayota Papantoni-Kazakos, Electrical Engineering
Diana Pickett Rathjen, Psychology
Carl Paul Sharpe, Architecture
J. Douglas Uzzell, Anthropology
C. D. Ushinsky, Russian
Lon J. Wilson, Chemistry

Instructors

John G. Ballentine, Economics

Stephen Otto Bender, Architecture

Richard V. Butler, Economics and Accounting John Joseph Casbarian, Architecture Robert Coupe, French Brian Curry, Health and Physical Education James Disch, Health and Physical Education John W. Keto, Electrical Engineering Charles Lyngar, French Frank Magrino, Economics Jack V. Matson, Environmental Engineering Russell G. Meier, Electrical Engineering Alton Zang Parks, Architecture Robert W. Samohyl, Economics John R. Underwood, Mathematics

Adjunct Appointments

Christopher J. Brown, Assistant Professor of Architecture

J. W. Chamberlain, Professor of Space Physics and Astronomy

H. Robert Douglass, Associate Professor of Architecture

W. Maurice Ewing, Professor of Geology

Carl S. Hacker. Assistant Professor of Mathematical Sciences

C. Girvin Harkins, Assistant Professor of Materials Science

Bartholomew P. Hsi, Associate Professor of Mathematical Sciences

James K. Monts, Assistant Professor of Sociology Ray H. Skaggs, Professor of Health and Physical Education

Harry J. Sperling, Professor of Mathematical Sciences Geoffrey B. Stanford, Professor of Architecture Tabor R. Stone, Assistant Professor of Architecture Paul Tobias, Assistant Professor of Psychology James A. Veltman, Assistant Professor of Architecture

Visiting Faculty

Chester A. Boterf, Jr., Associate Professor of Fine Arts Edwin T. Burton, Assistant Professor of Economics Denver T. Dale (Lieutenant Colonel, U.S.M.C.), Associate Professor of Naval Science Joseph N. DiCorcia Assistant Professor of History Richard N. Morrison (Lieutenant J.G., U.S.N.), Assistant Professor of Naval Science James A. Morrow, Associate Professor of Mathematics J. S. Mutchler, Assistant Professor of Physics

Billy B. Pinkerton (Major, U.S. Army), Assistant Professor of Military Science
Rene Pintard, Professor of French
David Redston, Assistant Professor of Russian
Richard J. Smith, Assistant Professor of History
Dieter Söll, Associate Professor of Biochemistry
Thomas W. Steele (Major, U.S.M.C.), Assistant
Professor of Naval Science
Wayne Thirsk, Assistant Professor of Economics
Ivar Karl Ugi, Professor of Chemistry
Edward O. Warren (Lieutenant, U.S.N.), Assistant
Professor of Naval Science
Dadi Wirz, Assistant Professor of Fine Arts
Finn Wold, Professor of Biochemistry

Lecturers and Visiting Lecturers

David William Brady, Political Science
James A. Campise, Mathematical Sciences
E. A. Carmean, Jr., Fine Arts
Graciela Daichman, Spanish
Nick J. de Vries, Fine Arts
Victor L. Emanuel, Political Science (Spring Semester)
Kathleen Rita Gibson, Anthropology
David Hancock, Fine Arts
Anita Kiperman, Spanish
Mark McCarty, Fine Arts
Jerome N. Sherman, Religious Studies
Mercedes Valdivieso, Spanish

Athletic Department Appointments

Fred Breckwoldt, Coach of Swimming Robert D. Brewster, Assistant Sports Information Director Stephen Lavon Brown, Assistant Athletic Trainer James Parker, Coach of Tennis

FACULTY PROMOTIONS Effective July 1, 1973

To Professor

Stephen D. Baker, Physics

Ray M. Bowen, Mechanical Engineering
& Mathematical Sciences
Alan Grob, English
F. Reese Harvey, Mathematics
Edward F. Hayes, Chemistry
Edward C. Lynch, Biomedical Engineering (adjunct)
Rex B. McLellan, Materials Science
Howard L. Resnikoff, Mathematics
Mervyn L. Rudee, Materials Science
Ronald Soligo, Economics
Frank K. Tittel, Electrical Engineering
Stuart D. Zimmerman, Mathematical Sciences (adjunct)

Associate Professors given Tenure

Chad Gordon, Sociology Klaus H. M. Weissenberger, Germanics





Highlights of the 1972-1973 academic year included opening of the new Biochemistry Department and Max Ernst's visit for the retrospective exhibition of his works in the Rice Museum.

To Associate Professor with Tenure

Constantine Armeniades, Chemical Engineering John W. Clark, Electrical Engineering Chandler Davidson, Sociology Edward A. Feustel, Electrical Engineering William H. Jaco, Mathematics William C. Martin, Sociology John C. Polking, Mathematics

To Assistant Professor

Peter G. Rowe, Architecture Mary F. Wheeler, Mathematics

ON LEAVE OF ABSENCE For all or a portion of the academic year

George Antunes, Assistant Professor of Political Science William Harvey Austin, Assistant Professor of Philosophy

Stephen Denio Baker, Associate Professor of Physics Stanley M. Besen, Associate Professor of Economics Richard Blanton, Assistant Professor of Anthropology Arthur Busch, Professor of Environmental Science and Engineering

Joseph Cooper, Professor of Political Science James E. Copeland, Associate Professor of German and Russian

Robert Floyd Curl, Jr., Professor of Chemistry Chandler Davidson, Assistant Professor of Sociology Rui J. P. de Figueiredo, Professor of Electrical Engineering and Mathematical Sciences Edward A. Feustel, Assistant Professor of Electrical Engineering

James Street Fulton, Professor of Philosophy Frederick C. Gamst, Associate Professor of Anthropology

Charles Garside, Jr., Associate Professor of History Stephen M. Gersten, Associate Professor of Mathematics

William E. Gordon, Professor of Electrical EngineeringF. Reese Harvey, Associate Professor of Mathematics

Frank Hole, Professor of Anthropology Donald Huddle, Professor of Economics Anthony W. Knapp, Visiting Associate Professor of Mathematics

Maria Teresa Leal de Martinez, Associate Professor of Spanish and Portuguese

Eva Jean Lee, Instructor in Health and Physical Education

T. W. Leland, Jr., Professor of Chemical Engineering Humberto Lopez-Morales, Professor of Spanish Charles E. McLure, Jr., Professor of Economics and Accounting

D. C. MacDougall, Visiting Assistant Professor of Fine Arts

Robert L. Patten, Associate Professor of English Howard L. Resnikoff, Associate Professor of Mathematics

John M. Roberts, Professor of Materials ScienceH. P. Rosenthal, Visiting Associate Professor of Mathematics Frederick D. Rossini, Professor of Chemistry
David A. Schum, Professor of Psychology
Gordon W. Smith, Assistant Professor of Economics
Monroe Kirk Spears, Professor of English
Anderson Todd, Professor of Architecture
William A. Veech, Professor of Mathematics
Fred R. von der Mehden, Professor of Political Science
Joseph Benjamin Wilson, Associate Professor of
German and Russian

DEPARTURES FROM THE FACULTY Effective July 1, 1973

Professors

R. C. Bishop (Colonel, U.S. Army), Military Science
M. C. Forbes, Environmental Science and Engineering (visiting)
Ulrich Gaier, Germanics (visiting)
Humberto Lopez-Morales, Spanish

Computer Science

Gilbert Baumslag, Mathematics

John P. Newport, Religious Studies (visiting)

Robert C. Minnick, Electrical Engineering and

Associate Professors

Bob Camblin, Fine Arts

A. Dyess, Architecture (adjunct)
Stephen M. Gersten, Mathematics
Donald V. Gorman (Commander, U.S.N.),
Naval Science (visiting)
Philip A. Hendren, Architecture
Anthony W. Knapp, Mathematics (visiting)
Michael Maschler, Mathematical Sciences (visiting)
H. P. Rosenthal, Mathematics (visiting)

Assistant Professors

William Harvey Austin, Philosophy
Roger B. Anderson, Russian
John Edgar Beam, Physics
Richard Blanton, Anthropology
Norman W. Charlton, Health and Physical Education
W. D. Davidson (Lieutenant, U.S.N.)
Naval Science (visiting)
Otto A. Gansow, Chemistry
Thomas Keith Gaylord, Electrical Engineering
(adjunct)
James M. Gerhardt, Political Science
John H. Iglesias, Jr., English
Gregory A. Johnson, Anthropology (visiting)
K. D. Johnson, Mathematics (visiting)
Robert Alexander Kapp, History

Friedrich G. Lang, Religious Studies (visiting) Alonzo August Leifeste, Jr., Architecture (adjunct) Phil R. Norman (Major, U.S. Army),
Military Science (visiting)
Charles Schorre, Fine Arts and Architecture
Winston Forrest Scott, Architecture
Charles E. Seagrave, Economics
Suresh P. Sethi, Economics (visiting)
Peggy B. Smith, Psychology (visiting)
Ernst Soudek, Germanics
Ewa Thompson. Russian
Robert Luis Vaccaro, Spanish (visiting)
Jacques Frank Yates, Psychology (visiting)

Instructors

Harry I. Barney, Health and Physical Education Susan Courtney, Health and Physical Education Richard S. Elman, Mathematics Ibrahim Eris, Economics Kathryn McMahon, French

Lecturers

Richard Bean, Economics (visiting)
W. Edwin Bosarge, Jr., Mathematical Sciences
Joel Howard Cyprus, Electrical Engineering
M. L. Furse, Religious Studies
Patricia Peck Griffin, Political Science (visiting)
Luisa Lopez Grigera, Spanish (visiting)
John Rains Kelly, Economics
Carol B. Kuykendall, Education
Malcolm R. MacPhail, Electrical Engineering
J. A. Tate, Fine Arts (visiting)
David B. Warren, Fine Arts

NECROLOGY July 1972-June 1973

Finley

Wesley James Finley, library exit checker at Fondren Library since 1955, died in January 1973 at age 84.

Ryon

Lewis B. Ryon, Professor Emeritus of Civil Engineering, died August 27, 1972, at age 78. He had served on the civil engineering faculty for 41 years before his retirement in 1958. In 1961, Dr. Ryon and his wife donated the funds to build and equip a modern engineering building. The Ryon Engineering Laboratory was dedicated in 1965.

Sims

Orland Sims, writer for the Office of Information Services and Assistant to the Sports Information Director, died September 5, 1972, at age 41.

James R. Nichols, French

William Marsh Rice University

Dr. Norman Hackerman President, Rice University January 15, 1974

SUBJECT: Financial Review

In response to your request, I submit a financial review of the University's operations.

During the year ending June 30, 1973, the principal of endowment funds at book value increased \$15,891,318 over the previous year, as a result of realized gains and gifts. In addition there was a one-time reclassification from plant funds, of advances to complete construction of auxiliary facilities, amounting to \$8,829,813. The accumulated unfunded prior year's deficits were charged to funds functioning as endowment. Total book value of the endowment at statement date was \$150,245,814, making the total increase \$24,721,131. (Market value was approximately \$176,536,000).

The operating deficit for this same period was only \$10,882. This deficit was covered by funds available in the Reserve for Contingencies. For the first time in three years the Reserve was not fully depleted to cover the operating deficit.

Presented on pages 18 through 25 are the financial statements of the University for the year ending June 30, 1973, and the opinion of our auditors, Arthur Andersen & Co.

The "Statement of Current Funds Revenues, Expenditures and Transfers," page 19, discloses in detail the year's financial operations, and the "Statement of Changes in Fund Balances," page 22, shows the detail of changes in our various funds.

There follows a Financial Review with comments on some of the highlights of the current year's activities and some interesting historical data on University operations.

Sincerely,

J. R. Persons Comptroller

GENERAL

At its meeting on March 22, 1973, the Board of Governors of the University approved a resolution setting out a permanent policy for the administration of the endowment funds of the University. The resolution was the culmination of a year-long study by independent auditors, the University's legal counsel, the Board's Finance Committee, and Comptroller's staff. It involved a complete review of the origin and administration of the funds since their inception, and a complete analysis of the legal restrictions imposed by the founder, by litigation in the interim, by the

State, and finally, a complete financial accounting.

As a result of this policy resolution, the accumulated deficits were provided for by funds functioning as endowment, and certain oil and gas revenues formerly designated as increases in endowment were reapportioned in the ratio of $27\frac{1}{2}\%$ to endowment and $72\frac{1}{2}\%$ to current income—effecting an increase in available current income. This increase coupled with a tight rein on expenditures (\$576,356 below authorized level) resulted in a deficit of only \$10,882 for the current year, compared with the initial projected deficit of \$2,222.534 in the budget presented to the Board at the April, 1972 meeting.

Table I shows the operating deficits Rice University has experienced starting with fiscal 1964. The deficits through 1970 were covered by Undesignated Gifts from the \$33 million campaign and a reserve for contingencies which had been accumulated in past years. The deficits for fiscal 1971 and 1972 exceeded these reserves by more than one million dollars and were covered by funds functioning as endowment.

Although the Board's policy resolution will increase the current available income by about \$1.5 million a year at present levels it will obviously have an affect on the rate of endowment growth.

The book value of general endowment has increased from \$61,702,000 in 1960 to \$116,629,000 in 1973, an increase of \$54,927,000, or 89%. This does not allow for the change in the value of the dollar. Taking this into account, the increase would only be \$45,224,000 or 73%. It is this difference between 89% and 73% that compels us to make every effort to make the endowment grow as much as possible while keeping a proper balance so as to be able to meet reasonable operating expenses.

TABLE I—OPERATING DEFICITS

		De	ficit Funded From	
Year	Deficit	5% Contingency Reserve*	Undesignated Campaign Gifts & Other	Funds Functioning As Endowment
1964 1965 1966 1967 1968 1969 1970 1971 1972 1973	\$ 269,526 858,312 1.132,082 352,786 252,872 627,662 1,387,470 1,832,174 1,554,065 10,882	\$ 269,526 858,312 1,132,082 972,027 1,013,345 299,974 10,882	\$352,786 252,872 627,662 415,443 352,537 200,051	\$ 466,292 1,054,040
* See I	Page 16			

In addition to the "Statement of Current Funds Revenues, Expenditures and Transfers," the financial report also includes the "Balance Sheets" and the "Statement of Changes in Fund Balances" for the years ending June 30, 1973 and 1972.

University accounting methods differ from those of business activities in that the basic entity of the University is a "fund." The resources of a fund are committed to carry out specific activities or to attain certain objectives. The accompanying "Balance Sheets" present the assets, liabilities and fund principal of each of the University's separate funds, at June 30, 1973, and the combined totals for June 30, 1973, and 1972. The "Statement of Changes in Fund Balances" summarizes the changes in each fund principal for the year just ended, and the total changes for this year and the one preceding.

Classes of funds are summarized as follows:

Current Funds—These reflect the operating activities of the University, both general and restricted.

Endowment Funds—These funds hold the gifts which the donor has designated to be maintained in perpetuity or for a specified period of time. They also include certain funds which have been designated by the Board of Governors to function as endowment, $27\frac{1}{2}\%$ of certain oil and gas revenues, and the "Reserve for Contingencies" which is for year to year fluctuations. The income generated by these funds comprises the major part of current funds revenues, other than sponsored programs.

Plant Funds—These record the funds invested in the University's plant and equipment as well as unexpended funds designated for future plant expansion or major renovations.

Loan Funds—These contain the gifts from donors, government grants and the University's own monies which have been designated for loans to eligible borrowers.

Retirement Funds—These are two retirement plans operating for the benefit of retired and present employees of the University. The first is administered entirely by TIAA/CREF and is not reflected in the financial statements. The second is the Rice Retirement Plan. The University has no equity in it, and the claims of retired and current employees, amounting to \$4,257,122 are shown as a liability against endowment assets. Pursuant to a policy approved by the Board, this plan is being phased out, except for retired employees, and the major portion of these claims were liquidated by transfers to TIAA/CREF by the end of October, 1973.

STUDENT AID

In 1965 Rice University for the first time began charging tuition. In that year the enrollment was 1,802 undergraduates and 607 graduate students. By 1972-73 enrollment had climbed to 2,567 undergraduates and 669 graduate students. They were charged tuition and fees amounting to \$6,418,349. Of this amount the University granted tuition aid totaling \$2,493,016. The net remaining for operations was only \$3,925,333.

Rice further assists students through fellowships and jobs on campus. In 1973 these amounted to \$1,413,218. Additionally, private sources and government grants furnished aid amounting to \$1,231,037 making total student assistance from all sources \$5,201,520.

The University, through the National Direct Student Loan Program, makes loans to students at no interest while the borrower pursues his education. Interest at only 3% is charged during the repayment period, which may last for ten years. Rice supplies one-tenth of these funds and the government nine-tenths. Rice also has its own loan program which operates on a basis similar to the National Direct Student Loan Program. Funding authorization for this program as of June 30, 1973 was \$600,000 and loans totaling just over \$207,000 were made in 1973 under this authorization. In addition to these two major programs, there are several privately sponsored loan funds.

At fiscal year-end the unpaid balances on outstanding student loans amounted to \$2,409,674, of which 72.1% has come from government funds.

TABLE II—HIGHLIGHTS AT 5 YEAR INTERVALS

	YEARS ENDING JUNE 30,				
	1953	1958	1963	1968	1973
OPERATING EXPENDITURES:	A 0 CO 5 OO 4	e 4.000.010	ф 0.0C0.041	Ф 00 CCC E40	e 06 000 701
Total Operations For Example:	\$ 2,695,084	\$ 4,969,919	\$ 9,262,341	\$ 22,666,540	\$ 26,282,781
Instruction	880,471	1,684,561	3,042,495	5,708,601	8,823,144
Sponsored Research & Training	120,592	449,637	1,426,046	10,182,921	6,321,472
Library	142,270	218,616	491,974	797,529	1,265,678
Plant Operations	344,734	452,590	614,003	882,956	1,379,787
SOURCES OF FUNDS FOR OPERATIONS:					
Student Tuition & Fees	212,762	232,626	224,047(1)	3,246,891	4,003,261
Gifts & Bequests		143,959	152,722	375,026	1,978,861
Endowment Income	1,526,918	2,759,137	3,875,481	5,181,194	9,426,459(2)
Sponsored Research & Training	118,840	487,681	1,656,550	11,446,671	7,772,301
Auxiliary & Other	1,053,183	1,141,469	3,133,890	2,352,805	3,702,598
GIFTS:					
Total Gifts Received	374,993	1,208,492	2,815,791	19,781,418	4,715,716
For Example:					
To Endowment Funds	326,804	365,455	761,039	10,105,354	1,261,754
To Plant Funds	48,089	293,367	521,183	6,729,497	715,707
STUDENT AID:					
Scholarships & Fellowships	75,156	— (3)	 (3)	1,205,425	2,493,016
Loans to Students	8,940	30,142	(3)	(3)	682,921
ENDOWMENT:					
Estimated Market Value	43,539,903	71,388,321	102,280,975	144,159,768	176,536,156
PLANT AND EQUIPMENT					
EXPENDITURES:	443,971	4,449,388	2,196,165	7,750,425	3,772,007
STUDENT ENROLLMENT:					
Undergraduate	1,504	1,681	1,727	2,089	2,567
Graduate	123	204	418	718	669

(1) Tuition was not charged prior to 1965

(2) The change in policy of handling oil and gas revenues explained on page 14 accounts for \$1,784,000 of this amount.

(3) Not Available

RESERVE FOR CONTINGENCIES

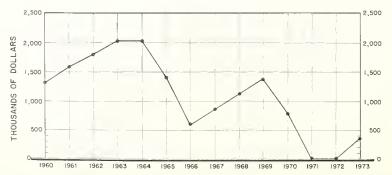
In 1952 the Board approved a policy of setting aside 5% of the unrestricted endowment income. By 1963 this reserve for contingencies had grown to its peak of \$2,050,000. In 1964, however, this reserve began to decrease as operating deficits grew with the expansion of academic programs during the mid-sixties.

The chart shows an increase in the reserve during the years 1966 through 1969. Deficits sustained in those

years were being met with undesignated gifts received from the \$33 million campaign. Because of continuing inflationary pressures, the deficits for 1971 and 1972 exceeded available reserves by more than a million dollars. During the year the Board authorized funding of these deficits from funds functioning as endowment.

Also at its meeting on March 22, 1973, the Board of Governors reaffirmed the policy of setting aside the Reserve for Contingencies. After absorption of this year's \$10,882 deficit, a balance of \$380,113 remains in this reserve at June 30, 1973.

CONTINGENCY RESERVE



Comments on Financial Operations

1973 versus 1972

REVENUES

Revenues, before transfers, increased \$3.410,000 to \$26,880,000. Ten percent of unrestricted endowment income was set aside for a Reserve for Plant Improvement and 5% for the Reserve for Contingencies. The increase occurred in the following categories:

Reapportionment of oil &	
gas revenues	\$1,784,000
Increases, other endowment income	273.000
Student tuition & fees, net	262,000
Federally sponsored programs	625,000
Auxiliary enterprises	74.000
All others	392,000
Increase	\$3,410,000

EXPENDITURES

Expenditures increased \$1,559,000 to \$26,283,000, resulting in a deficit of \$10.882—compared to \$1,554,000 in 1972. The increase in expenditures was incurred in the following areas:

Tono wing areas.		
Instructional Departments	\$	(81,000)
Sponsored Programs		824,000
Institute for the Arts		69,000
Library		219,000
Student Services		71,000
Plant Operations & Maintenance		50,000
General and Administrative		(81,000)
Retirement Contributions		130,000
Auxiliary Enterprises		358,000
Net Increase	\$1	,559,000

The increase in sponsored programs was distributed between \$331,000 in salaries and \$493,000 in expenses and equipment.

Library acquisitions were up \$129,000, salaries \$80,000 and other expenses \$10,000.

Student Services increase was the result of strengthening the offices of Academic Records, Financial Aid and Admissions. Retirement contributions resulted from increased expenditures for salaries and higher Social Security taxes.

The Auxiliary Enterprises' expenses increased \$358,000. A portion of this was caused by the added cost of operating the residential colleges and food service of \$130,000 and the Athletic Department of \$66,000.

PLANT & EQUIPMENT EXPENDITURES

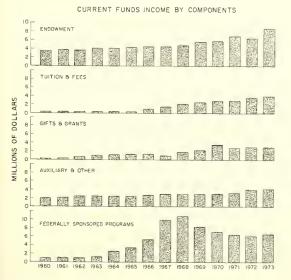
During the year additions amounted to \$3,772,000. Of this \$2,840,000 was equipment and Library books purchased from departmental budgets, restricted funds and sponsored programs. Plant improvements, totaling \$932,000, were funded in the amount of \$782,000 from the Reserve for Plant Improvements and \$150,000 from funds functioning as endowment.

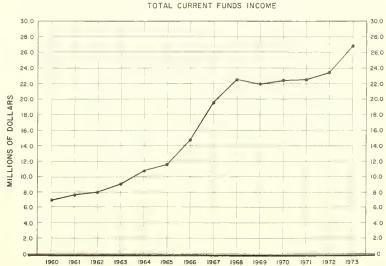
TOTAL CURRENT FUNDS INCOME

Annual income for current operations has increased from \$6,858,000 in 1960 to \$26,880,000 in 1973, an increase of \$20,022,000. This increase is accounted for as follows:

Student tuition and fees	\$3,779,000	(1)
Endowment Income	5,487,000	
Federally sponsored programs	5,838,000	
Gifts and grants	2,769,000	(2)
Auxiliary and other	2,149,000	, ,
Increase	\$20,022,000	

- (1) Tuition was first charged in fiscal year 1966.
- (2) Includes non-federally sponsored programs.





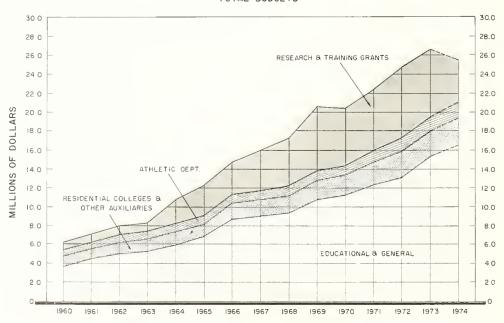
GROWTH OF OPERATING BUDGET

Since 1960 the Rice student body has grown from 1,986 to 3,236 students. During this period the academic and research programs were expanded especially while the Ten-Year Plan was in effect. These factors, coupled with inflationary pressures, have caused a continuing increase in the University operating budget. During the 1972-73 fiscal year, the cost of educating a student rose from \$3,995 to \$4,131 an increase of 3.4%. The chart below shows the growth of the budget by years.

ANNUAL SUPPORT PROGRAM

For the third consecutive year Rice held a drive aimed at raising funds for the operation of the University. Monies given during the year for operating purposes amounted to \$811,000 while an additional \$141,000 was received from payments on prior campaign pledges. This total of \$952,000 represents an increase of \$212,000 or 29% over 1971-72. An additional \$3,764,000 was received from donors whose gifts were restricted to endowment, capital projects, or operation of a specific program such as the Institute for the Arts.

TOTAL BUDGETS



Arthur Andersen & Co. Houston, Texas

September 24, 1973

To the Board of Trustees,

William Marsh Rice University:

We have examined the balance sheets of William Marsh Rice University (a nonprofit Texas corporation) as of June 30, 1973, and the related statements of current funds revenues, expenditures, and transfers and changes in fund balances for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We have previously examined and reported on the financial statements for the preceding year.

In our opinion, the accompanying financial statements present fairly the financial position of William Marsh Rice University as of June 30, 1973, and current funds revenues, expenditures, and transfers and changes in fund balances for the year then ended, in conformity with generally accepted accounting principles applied, other than for the change in the method of distributing oil and gas revenues as explained in Note 2 to the financial statements, on a basis consistent with that of the preceding year.

William Marsh Rice University

Statement of Current Funds Revenues, Expenditures, and Transfers For the Years Ended June 30, 1973 and 1972

	Year Ended June 30, 1973			Year Ended
	Unrestricted	Unrestricted Restricted		June 30, 1972, Total
REVENUES:				
Student tuition and fees	\$ 3,925,333	\$ 77,928	\$ 4,003,261	\$ 3,741,517
Endowment income (Note 2)	7,819,907	1,606,552	9,426,459	7,369,162
Federally sponsored programs		6,734,525	6,734,525	6,109,599
Gifts and grants	619,835	2,396,802	3,016,637	3,012,921
Other	23,123	112,511	135,634	27,727
Auxiliary enterprises	4,004,016	21,918	4,025,934	3,952,078
Less—Restricted receipts over transfers to revenues		(462,686)	(462,686)	(743,144)
	16,392,214	10,487,550	26,879,764	23,469,860
EXPENDITURES:				
Instructional departments	7,340,006	573,534	7,913,540	7,993,940
Sponsored programs		6,321,472	6,321,472	5,496,901
Institute for the Arts		909,604	909,604	840,346
Library	1,219,021	46,657	1,265,678	1,047,169
Student services	553,614	144,433	698,047	627,438
Plant operations and maintenance	1,376,781	3,006	1,379,787	1,330,267
General and administrative	2,223,768	147,589	2,371,357	2,452,442
Retirement contributions (Note 5)	1,218,520	_	1,218,520	1,088,478
Auxiliary enterprises	4,170,005	34,771	4,204,776	3,846,970
	18,101,715	8,181,066	26,282,781	24,723,951
EXCESS OF (EXPENDITURES) OR REVENUES BEFORE TRANSFERS	(1,709,501)	2,306,484	596,983	(1,254,091)
TRANSFERS: Endowed chairs	855,655	(855,655)		
Overhead from contracts and educational allowance	1,450,829	(1,450,829)		_
Provisions for plant improvements and contingencies (Note 2)	(607,865)		(607,865)	(299,974)
EXCESS OF EXPENDITURES AND TRANSFERS OVER REVENUES	\$ (10,882)		\$ (10,882)	\$(1,554,065)

William Mrs

Balance Sheets — u

CASH, RECEIVABLES, AND PREPAYMENTS: Cash \$ 297,664	\$ —
Gash ϕ 257,001	·
Accounts and accrued receivables 332,730	533,272
Notes receivable, student loan funds —	<i>→</i>
Prepayments, etc. 173,218	131,650
803,612	664,922
	001,344
INVESTMENTS (Note 2):	
Bonds and certificates of deposit, quoted market of	
\$22,681,000 and \$19,982,000 at respective dates —	26,941,828
Stocks, quoted market of \$140,723,000 and \$140,729,000	
at respective dates —	110,171,830
Mortgage and collateral loans —	6,900,841
Oil and gas properties, less amortization of \$27,041,000	
and \$26,097,000 at respective dates	3,930,739
Improved real estate, less amortization of \$5,464,000	
and \$4,827,000 at respective dates —	6,066,222
Undeveloped real estate and other —	1,614,519
Interfund investments—	
Auxiliary facilities financed from endowment (Note 3)	7,159,303
Other 3,611,085	(4,501,011)
_3,611,085	158,284,271
EDUCATIONAL PLANT, at cost (Note 3):	
Land, buildings, and equipment —	-
Construction-in-progress	
<u>\$4,414,697</u>	\$158,949,193
LIABILITIES AND FUND BALANCES	
LIABILITIES:	
Accounts payable \$1,526,003	\$ 151,036
Deferred income and deposits (Note 4) 1,051,819	334,021
Deposits of collateral for securities loaned (Note 6)	3,961,200
Advances from Federal government for loan funds —	<u> </u>
Retirement funds (Note 5)	4,257,122
2,577,822	8,703,379
FUND BALANCES 1,836,875	150,245,814
<u>\$4,414,697</u>	\$158,949,193

June	30,	1973

June 30, 1973					
Plant Funds	Loan Funds	Total	June 30, 1972 Total		
\$ 412,453	\$	\$ 710,117	\$ 1,092,838		
_		866,002	753,122		
_	2,429,918	2,429,918	1,846,669		
		304,868	232,518		
412,453	2,429,918	4,310,905	3,925,147		
		26,941,828	21,100,008		
	17,582	110,189,412	93,903,088		
_		6,900,841	7,624,215		
	_	3,930,739	4,619,913		
_		6,066,222	6,238,218		
	_	1,614,519	1,760,344		
(7,159,303)	_	_			
772,901	117,025				
_(6,386,402)	134,607	155,643,561	135,245,786		
71,803,448	_	71,803,448	68,869,666		
361,719		361,719	733,666		
72,165,167		72,165,167	69,603,332		
\$66,191,218	\$2,564,525	\$232,119,633	\$208,774,265		
\$ 1,245	\$ —	\$ 1,678,284	\$ 1,045,098		
		1,385,840	927,788		
_		3,961,200			
_	1,831,222	1,831,222	1,580,315		
		4,257,122	4,041,826		
1,245	1,831,222	13,113,668	7,595,027		
66,189,973	733,303	219,005,965	201,179,238		
\$66,191,218	\$2,564,525	\$232,119,633	<u>\$208,774,265</u>		

William Mrs

Statement of Chag For the Years Ede

	Current 1	Funds	Ende		
	Unrestricted	Restricted	Income Restricted	Income Unrestricted	
ADDITIONS TO FUND BALANCES:					
Gifts and bequests	\$ —	\$ —	\$ 994,876	\$ 143,811	
Gain on sale of investments		_	493,976	7,746,268	
Oil and gas royalties and bonuses (Note 2)	_		14,473	10,484	
Investment income (interest allowed) (Note 2)	_	_	125,680		
Distribution from Rice Land Lumber Co.	_			194,700	
Miscellaneous	7,212		322		
Current funds transactions— Equipment purchases from current funds	_	_	_	1	
Restricted receipts over transfers to revenues	_	462,686	_	_	
Provisions for plant improvements and contingencies (Note 2)					
	7,212	462,686	1,629,327	8,095,263	
DEDUCTIONS FROM FUND BALANCES:					
Current funds expenditures and transfers over revenues	10,882			_	
Assets retired (Note 3)				_	
Miscellaneous	84,656	42,171	50,957	_	
Restricted grant transferred to sponsored research		818,074			
	95,538	860,245	50,957		
TRANSFERS AMONG FUNDS:					
Operating deficits transferred to endowment	1,164,710		_		
Reclassify auxiliary facilities financed from endowment previously classified as invested in plant (Note 3)	_			_	
Unrestricted funds reclassified to income restricted endowment	_		4,894,607	(4,894,607)	
Plant and equipment expenditures	_				
Other	9,497	(411,955)	356,319		
	1,174,207	(411,955)	5,250,926	(4,894,607)	
NET INCREASE (DECREASE) FOR YEAR	1,085,881	(809,514)	6,829,296	3,200,656	
FUND BALANCES, beginning of year	_(1,084,135)	2,644,643	26,787,426	50,176,059	
FUND BALANCES, end of year	\$ 1,746	<u>\$1,835,129</u>	\$33,616,722	\$53,376,715	

The accompanying notes are an int

University

nd Balances

30, 1973 and 1972

Plant Funds				Year Ended	
Functioning as Endowment	Unexpended	Invested in Plant	Loan Funds	Total	June 30, 1972, Total
\$ 123,067	\$ 715,707	\$ —	\$ 10,310	\$ 1,987,771	\$ 2,051,297
6,841,719	_	_	_	15,081,963	1,436,481
—	_	_	_	24,957	3,135,320
_	15,587		14,977	156,244	75,482
_			_	194,700	117,474
_	5,285			12,819	452,584
_	_	1,263,501	_	1,263,501	1,043,090
_	_		_	462,686	743,144
607,865				607,865	299,974
7,572,651	736,579	1,263,501	25,287	19,792,506	9,354,846
	_	_	_	10,882	1,554,065
		846,402		846,402	754,294
28,198	59,878	_	24,561	290,421	116,884
				818,074	
28,198	59,878	846,402	24,561	1,965,779	2,425,243
(1,164,710)		_	_		_
8,829,813		(8,829,813)		_	_
_	_	-	_	_	_
(366,939)	(604,878)	971,817	_		_
(151,438)	37,662	(71,478)	231,393		
7,146,726	(567,216)	(7,929,474)	231,393		
14,691,179	109,485	(7,512,375)	232,119	17,826,727	6,929,603
48,561,198	_1,125,869	72,466,994	501,184	201,179,238	194,249,635
\$63,252,377	<u>\$1,235,354</u>	<u>\$64,954,619</u>	<u>\$733,303</u>	\$219,005,965	\$201,179,238

these financial statements.

William Marsh Rice University

Notes to Financial Statements

June 30, 1973 and 1972

(1) GENERAL—

Current funds—

The current unrestricted fund is used to account for operations relating to unrestricted instructional, research, auxiliary and general activities. Cash balances of all funds have been commingled in the current operating fund; cash transactions applicable to other funds are charged or credited to the appropriate interfund balances.

Current restricted funds account for gifts, grants, and contract funds in support of research, training, library, instruction and student aid. These funds are expendable only for the purpose specified by the donors. The statement of current funds revenues, expenditures, and transfers reflects restricted revenues actually expended; excesses of revenues received or utilized in each year have been added to or subtracted from the fund balances available for future utilization.

Endowment funds—

Income restricted endowment funds generally represent gifts and bequests received by the University for which the donors have stipulated that the principal is to be maintained inviolate and income resulting from investment of the funds may be expended for specified purposes.

Other endowment funds consist of income unrestricted funds, including the Founder's endowment, and funds functioning as endowment. Income unrestricted funds represent gifts and grants together with allocated realized capital gains that are maintained inviolate. Income earned by investment of these funds is used for unrestricted operations. Funds functioning as endowment consist of discretionary funds which the Board of Governors has designated as endowment, the income from which is to be used for unrestricted operations.

Student loan funds—

Student loan funds include gifts and grants which are limited by the terms of donors to the purpose of making loans to students. Also included in these funds is the National Direct Student Loan Program (\$1,957,000 at June 30, 1973) financed by the Federal government and administered by the University.

Plant funds—

Plant funds consist of unexpended gifts and grants which are held for acquisition or construction of physical properties and total invested in the educational plant.

(2) INVESTMENTS—

Investments are recorded at cost or fair market value at date of acquisition. Premiums or discounts applicable to bonds purchased are amortized against investment income over the life of the bonds.

Most income restricted endowment funds participate in a common pool which is operated on a market value basis. Those income restricted funds which by the terms of the gift do not permit participation in such a pool are maintained on a separate investment basis.

Other endowment funds together with interfund investment amounts of other funds are commingled for investment purposes in the general investment pool. Interfund investments do not share in the general investment pool's gains and losses, but are allowed interest.

Investments in oil and gas properties and improved real estate held for investment are recovered through amortization charged against related income. Prior to July 1, 1972, an amount equal to four percent of the unamortized balance of oil and gas properties was transferred from oil and gas receipts to current income and the remainder was added to endowment funds. Effective July 1, 1972, the Board of Governors authorized the transfer of 72½ percent of such oil and gas receipts (\$1,658,238 for the year 1973) to current income and $27\frac{1}{2}$ percent as amortization of the related investments.

Income from endowment funds available for current operations is reduced by a transfer of five percent as a provision for contingencies and a transfer of 10 percent, less departmental equipment purchases, as a provision for a reserve for plant improvements.

(3) EDUCATIONAL PLANT—

The educational plant is stated at cost. No provision is made for depreciation of educational buildings and equipment.

A depreciation charge (\$200,666 in 1973) was made to auxiliary operations for recovery of the cost of that portion of these operations not financed by gifts and grants. This charge is based substantially on estimated useful lives and is intended to reimburse endowment funds for amounts advanced (total of \$8,829,813) to complete funding of construction.

Current unrestricted expenditures include equipment acquisitions of \$594,162 and \$401,122 in 1973 and 1972, respectively, which amounts have been added to the related property accounts. Six and two-thirds percent of capitalized equipment is charged off (retired) each year.

(4) GIFTS—

Gifts totaling \$4,715,716 were received during the year, of which \$497,201 were for unrestricted current operations to be used for the 1973-74 year. Gifts of \$491,398 received during the prior academic year were included in current unrestricted revenues. Other gifts received during 1973 and added to the appropriate fund balances consisting of endowment (\$1,261,754), physical plant improvements (\$715,707) and student loan funds (\$10,310).

(5) RETIREMENT PLAN-

Retirement funds represent balances of pension funds held for employees. The University has a retirement plan for employees who do not participate in other annuity purchase plans currently available. The University's policy is to expense pension cost on a current basis. A substantial portion of these funds are to be transferred to a separate trustee in 1974.

(6) DEPOSITS OF COLLATERAL FOR SECURITIES LOANED—

The University received \$3,961,208 as collateral deposits for certain securities temporarily loaned to brokers. As of June 30, 1973, the securities on loan amounted to \$2,203,852 at cost (market \$3,948,737) and the collateral deposits were invested in short-term paper.

(7) STATEMENT RECLASSIFICATIONS—

Certain reclassifications have been made to the 1972 financial statements to make them comparable with those of the current year.



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